

Archaeological Investigations at Chobareti in southern Georgia, the Caucasus

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Abstract

*Once a restricted military zone, the Akhaltsikhe-Aspindza region within the Samtskhe-Javakheti province of Georgia is now the focus of archaeological investigations. This paper brings together the main data from three years of fieldwork at the ancient site of Chobareti, situated at 1610 metres above sea level, which has so far revealed a Kura-Araxes settlement and burials, and a late Antique/Medieval stronghold.**

Introduction

(Kakha Kakhiani and Antonio Sagona)

A glance at any map of excavated sites in the southern Caucasus will show clearly the relative rarity of controlled excavations in the Samtskhe-Javakheti region of Georgia, which shares modern geo-political borders with Armenia and the north-eastern tip of Turkey, in the Lake Çıldır district. Compared to the neighbouring province of Kvemo-Kartli, boasting such prominent attractions as the hominid site of Dmanisi, the cluster of Neolithic settlements in the vicinity of Marneuli, and the rich barrow burials in the neighbourhood of Trialeti, our excavated evidence from Samtskhe-Javakheti is slight (see Bedianashvili below). Moreover, excavations came late to the region. Following a series of field surveys intermittently conducted over several decades, the first serious effort to excavate an ancient site was carried out by Taniel Chubinishvili in the 1950s at Amiranis Gora, a Kura-Araxes settlement and cemetery situated in the vicinity of Akhaltsikhe. Some 15 years past before Otar Djaparidze investigated the Middle Bronze Age barrow burials in the Meshketi region, and Otar Gambashidze began his extensive Meskhet-Javakheti archaeological expedition, a combination of survey and excavations. One of the main reasons for the lag in archaeological activity in Samtskhe-Javakheti during the Soviet era was its geographical proximity to Turkey. As a restricted military-border zone, it was difficult even for Georgian archaeologists to work there.

Many separate areas of Georgia undoubtedly deserve prompt attention, and regions of Aspindza and Akhaltsikhe, which encompass the upper Kura (Mtkvari) and Uraveli river valleys, can be counted among them (Fig. 1: 1). With excellent links to both east and west, including the Chikiani obsidian source around Lake Paravani, with direct mountain passes to the rich highland plains of north eastern Anatolia, and with a series of trails that strike northwards to Shida Kartli and southwards across the highlands to north-western Armenia, this region of the southern Caucasus has always enjoyed certain natural advantages, derived most especially from its strategic situation.

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This report sets out to provide a summary framework within which three seasons of work at the site of Chobareti can be studied, by establishing firm stratigraphic, chronometric and palaeo-environmental contexts for the material culture of the communities that lived at this site. It does not set out to provide a synoptic review of the periods in question, an important exercise that will be left for later studies. Chobareti was discovered in 2008 during the construction of the 32 km Aspindza-Akhaltshikhe gas pipeline, a section of a larger network of gas pipelines being laid in southern Georgia.¹ The series of archaeological excavations recorded here, conducted under the auspices of the Georgian National Museum, began as a one-month salvage operation in 2009 (1–26 August). Further work was conducted during a short field season in 2011 (21–31 August), when palaeo-environmental researchers from led by Erwan Messager from Université de Nice Sophia Antipolis joined the project to recover samples. The size of the team and the parameters of activities at Chobareti expanded in 2012, when the University of Melbourne incorporated the project into its broader Georgian-Australian Investigations in Archaeology (GAIA) project. This latest field season successfully ran between 1st and 30th June.

For permission to work at the site we are deeply indebted to Professor David Lordkipanidze, General Director of the Georgian National Museum, who has supported and encouraged our research from the beginning, and Zurab Makharadze, Head of the Otar Lordkipanidze Centre for Archaeology, Georgian National Museum. In addition to those people who have contributed their own sections to this article, Kakha Kakhiani and Antonio Sagona extend thanks to the other members of our team — trench supervisors, surveyors, geophysicist, and architects — listed here in alphabetical order, all of whom did a very great deal to help us while we were at the site: Merab Dzneldze (2009); Elguja Ghligvashvili (2009); Leri Jibladze (2009); Levan Jorjadze (2009); Zuka Mchedlishvili (2012); Aleks Michalewicz (2012); Guillermo Narsilio (2012); Cliff Ogleby (2012); Aleksandre Orjonikidze (2009); Isabel Pacheco (2012); Emily Poelina-Hunter (2012); Eldar Rubinov (2012); Vaja Sadradze (2009); Belle Shapardon (2012); Aastha Sharma (2012); Nika Tskvitinidze (2012); and Rod White (2012). During each of the three seasons workmen were employed from nearby villages of Chobareti and Zveli, who assisted us with digging, sieving and pottery washing. We are grateful both for their commitment to the project and for the warm hospitality they and their families extended to us. Finally, we are very appreciative to the funding bodies, which made the field seasons and post-excavation analyses possible. In 2012, the project was principally funded by a generous grant from the Australian Research Council.²

A History of Archaeological Research in the Akhaltshikhe–Aspindza regions

(*Giorgi Bedianashvili*)

Broadly speaking, Akhaltshikhe–Aspindza region, within the Samtskhe-Javakheti province, is one of the richest in Georgia in terms of historical monuments. One of the most prominent and well-known sites is Vardzia, the extensive Mediaeval cave city. Scientific interest in antiquities in this area began in the last quarter of the nineteenth century. At that time only archaeological materials that were revealed by chance were studied. Specialists such as Dimitri Bakradze collected and

¹ The preliminary results of the 2009 excavations at Chobareti, published in Georgian (Kakhiani *et al.* 2011), have been incorporated into this paper in revised form.

² Australian Research Council Discovery Project — DP120103142.

recorded artefacts then lodged them with the newly established museums of the Caucasus, enriching their collections. One such case occurred in the Akhaltsikhe region, close to the River Ockhe, where in 1886 pottery and coins were found during construction works.³

More intensive scientific research in this region dates to 1941, when Giorgi Nioradze of the Georgian State Museum studied archaeological objects found by chance during the reconstruction of the railway, and conducted an archaeological survey in the Kura River ravine, from Borjomi to Akhaltsikhe. As a result of Nioradze's survey, materials previously unattested in this region were revealed. Close to Akhaltsikhe, in the village of Slesistsikhe and the area surrounding Buza, he recorded cist graves containing assemblages belonging to the classical period.⁴

A second archaeological survey took place from 1953 to 1955, a joint expedition of the Vardzia Museum-Reserve and the Tbilisi Pushkin Pedagogical Institute, directed by Chubinishvili. This survey differed from the previous one in being more concentrated on the Akhaltsikhe and Aspindza region. Reviewing archaeological materials stored at local museums, Chubinishvili observed an absence of Palaeolithic artefacts. However, the abundance of natural stone materials for manufacturing tools and the evidence of caves led him to believe that traces of human occupation in ancient times would eventually be found. The earliest materials his survey described were Eneolithic (Chalcolithic) stone mattocks from the villages Zveli and Tmogvi. Also identified were bronze materials from Khizabavra in the Aspindza district; the items included bronze mattocks, a zoomorphic figurine and a spearhead.⁵ Chubinishvili's survey also recorded *kurgans*, megalithic buildings and cist graves around the village Nakalakevi, at a place called Bertakana. In Uraveli Gorge, east of St Elia Mountain, the multilayer sites Lodobana and Datkobilikanebi were detected. Also worthy of mention is the site of Zadengora, close to the village of Berana, which contained materials dated to the third millennium BC as well as to the classical and early medieval periods.⁶

In 1953, near the village of Agara, 5–7 km southwest of Vardzia at an altitude of 2000 m, the expedition observed an ancient settlement close to the River Dumeila. It featured a complex stone construction system, situated on the terrace and containing about 60 stone structures with oval-shaped pits up to 3.3 m deep and 2.5 m wide. Based on ceramic materials collected at the site, Chubinishvili distinguished two periods: Eneolithic and Iron Age.⁷ Another site detected during the survey was located close to Akhaltsikhe at Amiranis Gora (altitude 1061 m). At a depth of 1.5 m, damaged cist graves were found. After the graves were cleaned, they were found to contain human bones and ceramic material, resembling finds from the Kiketi and Dabla-Gomi sites and belonging to the Eneolithic (Chalcolithic) period.⁸

This discovery prompted a survey of Amiranis Gora in 1955 and 1956, which became the basis of the first systematic archaeological excavations in the Meskheti region. Beginning in 1958 under the direction of Chubinishvili, about 2000 sq. m was excavated, revealing dwellings, shrines and burials. The greater part of the materials dated to the third millennium BC; however,

³ Djorbenadze 2005, p. 217.

⁴ Nioradze 1944, pp. 219–220.

⁵ Chubinishvili *et al.* 1957, p. 126.

⁶ Chubinishvili 1963, p. 11.

⁷ Chubinishvili *et al.* 1957, p. 120.

⁸ Chubinishvili *et al.* 1957, p. 122.

Late Bronze Age and classical-period as well as late medieval layers were also attested.⁹ Despite the ubiquity of Kura-Araxes sites in the Meskheti region, for a long time Amiranis Gora remained the only comparatively well-studied settlement. Its building architecture, metal objects and funeral rites are still the subject of many general studies on Kura-Araxes culture.¹⁰

The next stage of archaeological research in the Meskheti region was conducted between 1970 and 1977, in the form of a joint expedition of the Georgian State Museum and Tbilisi State University directed by O. Djaparidze. By the time it began, rich Middle Bronze Age Trialeti culture *kurgans* were already well known in the neighbouring Tsalka region and were attracting many specialists.¹¹ The main aim of Djaparidze's campaign was to investigate the distribution of Middle Bronze Age *kurgans* of this kind in the Meskheti region, where at that time the situation was poorly known.¹² Several concentrations of *kurgans* were attested around the villages close to Vardzia. The northernmost distribution of burials was observed in the villages of Gunde and Zveli; further north, closer to Akhaltsikhe, none was found. Archaeological excavation of the barrows was conducted in Akhchia, 6 km distant from Vardzia on the left bank of the River Kura; at Bertakanebi, located close to Tmogvi on the right bank of the Kura; at Chachkrebi in Beri Gorge; and in the valley of Niala on the left bank of the Kura River.¹³

Burials at those sites exhibited not only the large stone mounds typical of Trialeti culture, but also a very specific grave architecture characteristic of the local area. The barrows had stone cromlechs, inside which the stone burial chamber was placed. The burial chambers mainly had eastern-style *dromoi*. Meskheti *kurgans* contained somewhat different assemblages from those found in the *kurgans* on the Tsalka plateau. For these reasons the authors came to consider them evidence of a Meskhetian variation of Trialeti culture.¹⁴

Besides Middle Bronze Age materials at the above-mentioned sites, a later period was attested as well. *Sondages* made close to Bertakanebi, on the hilltop opposite Tmogvi castle, revealed large stone walls, around which medieval-period ceramic material was collected. Similar hilltop stone constructions were discovered between the villages of Niala and Lebi. In addition, in the territory of Bertakanebi, stone circles (about 40–70 m in diameter) with ash-filled pits inside were noted. Ceramic material collected from the settlement was from the Late Bronze Age to medieval periods. Several medieval-period graves were also located inside the stone circles.¹⁵

More systematic archaeological investigation of the Aspindza-Akhaltsikhe region was undertaken by the Samtskhe-Javakheti expedition of the Archaeological Research Centre, directed by Otar Gambashidze. This expedition continued from the mid-1970s almost up until the 1990s. During this time, the expedition surveyed and excavated sites belonging to a range of time periods. The earliest artefact attested in the Akhaltsikhe-Aspindza region comes from the village Khaki, in the valley of Tsikhis Keli. It is an andesite hand-axe of Acheulean-Mousterian type from the Lower Palaeolithic period. In the same territory, material belonging to the so-called

⁹ Chubinishvili 1963, pp. 15–17.

¹⁰ Orjonikidze 1997, p. 2.

¹¹ Kuftin 1940.

¹² Djaparidze *et al.* 1981, pp. 6–18.

¹³ Djaparidze *et al.* 1981, pp. 19–135.

¹⁴ Djaparidze *et al.* 1981, pp. 170–172.

¹⁵ Djaparidze *et al.* 1981, pp. 136–143.

early farming culture (Eneolithic/Chalcolithic) was observed. Ancient mounds (*tepes*) were also surveyed in Khaki.¹⁶

Meanwhile, the Aspindza district yielded several group of barrows belonging to the late phase of the Middle Bronze Age and the early Late Bronze Age. These structures were similar to those excavated from 1970 to 1977 by Djaparidze. One barrow type was comparatively small — the cromlech type; another had a stone or earth mound. Barrows excavated in the village of Oqrokana dated to the seventeenth to sixteenth-century BC, similar to those found in the territory between the villages Saro and Khizabavra.¹⁷ Sites representing a wider timeframe were found in the village of Saro itself, at Berbukeri cemetery. Besides Late Middle Bronze Age barrows, there were burials of the Late Bronze, Iron Age and Hellenistic period. In the southern part of Saro, the team investigated a castle and collected Late Bronze Age pottery sherds from the surface, whereas in the village Khizabavra, an ancient settlement was observed in an area known as Gomebi.¹⁸

A more intensive distribution of barrows was noted in the village of Zveli, and also at Gokhebi and Koshkebi in the territory between Zveli and Chobareti. Zveli barrows are of the same type as those found in the territory of Vardzia. Based on the materials found in the burial chambers, two periods were distinguished: the mid-second millennium and the first half of the first millennium BC. Both inhumations and cremations were found in the barrows.¹⁹ Two elements led Gambashidze to postulate Aegean influence at Zveli: the rectangular burial chamber with false arch roofing, typical of Zveli barrows, and the presence of cremation, which is uncommon throughout the Caucasus.²⁰ Also in Zveli, in a place called Gokhebi, a settlement of the late phase of the Middle Bronze Age was attested with the discovery of a discoid-headed bronze pin typical of that period.²¹

Gambashidze's expedition investigated sites from other periods in Zveli as well. Two kilometres east of the village, on the left-hand side of the road to Aspindza, it surveyed a valley of barrows. Then, in Gogotubani, 500 m southwest of Zveli, there was a medieval-period settlement, and in the area of Rabati in Zveli, ceramic material belonging to the Kura-Araxes culture was collected; at this site, first attested by Chubinishvili in the 1950s, the team also identified the existence of Middle Bronze and Late Bronze Age deposits on top of the Kura-Araxes period.²² Zveli, too, had a settlement of the third millennium BC, at a place called 'Samarkhi kanebi', represented by red-black Kura-Araxes ceramics.²³

An Early Bronze Age site was also observed close to Zveli and Chobareti, in the village of Muskhi, on the hills called 'Fuga'.²⁴ Besides this site, another settlement yielded a bronze axe considered a prototype Colchian axe and dated to the fifteenth century BC.²⁵ Also in Muskhi,

¹⁶ Gambashidze *et al.* 1980, pp. 83–84.

¹⁷ Gambashidze *et al.* 2004, p. 50.

¹⁸ Gambashidze *et al.* 2004, pp. 47–49.

¹⁹ Gambashidze and Kvijinadze 1979, pp. 55–60; Gambashidze *et al.* 1980, pp. 80–81; Gambashidze and Kvijinadze 1981, p. 64; Gambashidze *et al.* 2004, p. 44.

²⁰ Gambashidze 1983, pp. 1–16.

²¹ Gambashidze and Kvijinadze 1981, p. 64.

²² Gambashidze *et al.* 1985, p. 36.

²³ Gambashidze *et al.* 1980, p. 82.

²⁴ Gambashidze and Kvijinadze 1982, p. 30.

²⁵ Gambashidze and Kvijinadze 1981, p. 64.

a medieval church and several associated graves were excavated.²⁶ Intensive excavation was conducted at Tsnisi in the Akhaltsikhe district, where at the cemetery 52 cist graves of the Hellenistic period (fourth to third centuries BC) were studied. Of note is the only example of a jar grave in this region. The cemetery was destroyed by medieval-period buildings, which were investigated as well.²⁷

Gambashidze's expedition also investigated other places in the Akhaltsikhe-Aspindza area. An early medieval settlement was recorded in Uraveli Gorge in the Akhaltsikhe region.²⁸ In the same district, a settlement with pits filled with charcoal and sherds was located at a place called 'Kvaegji khevi', and another settlement was also discovered during the reconstruction of the main road in the village of Rustavi.²⁹ At Toki in the Aspindza district, stone constructions were assigned to the different periods of the Bronze Age on the basis of surface material.³⁰

The westernmost distributions of Middle Bronze Age barrows typical for the territory around Vardzia (Akhchia and Bertakanebi) and also Zveli can be placed 20 km west of Akhaltsikhe, in Ude in the Adigeni district. Here Gambashidze's expedition surveyed a group of barrows with stone mounds. Since graves of this type were considered a Meskhetian variation of Trialeti culture *kurgans*, Gambashidze considered the Ude barrows the western limit of Trialeti culture.³¹ Ude is also known for the discovery of a Late Bronze/ Iron Age hoard in 1956, containing hundreds of iron and bronze objects typical of western Georgian Colchian culture. Among them were rectangular bronze buckles with incrustation similar to those found at the Koban necropolis in North Ossetia.³²

More recent archaeological research in the Akhaltsikhe-Aspindza region was associated with the BP pipeline. In 2003–2006, during the construction of the pipeline across southern Georgia, a number of salvage archaeological excavations were conducted.³³ An important part of these rescue operations took place in the Akhaltsikhe region. The earliest archaeological materials attested were found at Choreti, close to Vale in the western part of the region, where an Acheulian camp of the Lower Palaeolithic period was excavated.³⁴ Choreti also has an early medieval settlement and a cemetery where 17 graves were investigated.³⁵ Eneolithic material was found below the medieval deposits at the settlement.³⁶

Close to Vale, excavations at Orchosani revealed mainly rectangular buildings associated with the Kura-Araxes horizon. The excavator, Aleksandre Orjonikidze, also likened certain of the ceramic forms to Bedeni pottery, while he compared another part of the ceramic assemblage with examples from Western Georgia and from the Maikop culture typical of the Northern Caucasus. A bronze mattock found at Orchosani is also comparable with Maikop culture.³⁷ Early Bronze Age occupation was attested at Tiseli seri, close to Tiseli village, located between the Akhaltsikhe and Borjomi

²⁶ Gambashidze *et al.* 1984, p. 18.

²⁷ Gambashidze *et al.* 1984, p. 19.

²⁸ Gambashidze *et al.* 1980, p. 85.

²⁹ Gambashidze and Kvijinadze 1981, p. 64.

³⁰ Gambashidze *et al.* 2004, p. 50.

³¹ Gambashidze *et al.* 1980, p. 84.

³² Chubinishvili *et al.* 1957, pp. 116–117.

³³ Erkomaishvili 2010, pp. 12–14.

³⁴ Grigolia 2010, pp. 52–60.

³⁵ Chikhladze 2010, pp. 472–478.

³⁶ Baramidze and Pkhakadze 2010, pp. 454–465.

³⁷ Orjonikidze 2005, pp. 46–50; Orjonikidze and Jobladze 2010, pp. 133–136.

regions, where rectangular buildings as well as 10 graves were excavated. In contrast to Orchosani, the material revealed at Tiseli seri, in both the settlement and the graves, belongs only to the Kura-Araxes culture and dates to the third millennium BC.³⁸ The later periods are also represented. At Klde, near Akhaltsikhe, classical remains were found — a settlement and 94 burials — whereas close to the village Tiseli, there is a Medieval settlement dating to the fifteenth to sixteenth centuries BC.³⁹

Among the most recent discoveries in the Akhaltsikhe region are those from Atsquri, investigated as part of the BP pipeline rescue excavations. A seventh–eighth century church, its wine cellar, and also a grave were excavated. Another wine cellar, this time datable to the tenth–sixteenth centuries, was recorded at a place called ‘Navenakhari’. Here, the association of wine presses and vats with an altar and bakery not only provide a complete picture of the wine making process, but it also lead the author to conclude that wine making was a ritual activity in the region.⁴⁰ Atsquri is also known for its Middle Bronze Age barrow of the Trialeti culture, where mass burial was practiced, not unlike the one found at Zveli.⁴¹

Finally, in the Aspindza-Akhaltsikhe region and generally for the whole of southern Georgia, underground tunnel complexes termed ‘Darani’ are very common, represented at almost all settlements. These complexes date to the Late Medieval period and are connected to the Ottoman invasions. One of such tunnel complex was investigated at Lepisi close to Agara 13 km west of Vardzia. Here 12 tunnels and associated rooms build with stones were recorded. To judge by the ceramics the *darani* at Lepisi can be placed in the sixteenth to seventeenth centuries AD.⁴²

Site Description

(*Kakha Kakhiani and Antonio Sagona*)

The ancient site of Chobareti, located about 1.2 km north of the village of the same name, is conspicuously situated on one of the peaks of the Chobareti mountains, about 1610 m above sea level, and visible from every direction across the countryside (Fig. 1: 2). It comprises the southern slopes of two small hills and the saddle in between. The northern slopes, overlooking the Kura Valley and the village of Rustavi beyond, are steep and covered with dense vegetation. A lush turf covers much of the site and diminishes the visibility of surface sherd scatter, making it difficult to determine the size of the occupation, but the pipeline cutting indicates that it extends approximately 700–800 m along its east-west axis. From the top of the saddle to the pipeline the site measures around 80 m, though ancient occupation may well extend further down the slope beyond the cutting. A series of distinctive wide terraces run across the site of Chobareti. There are five terraces from the top of the saddle (Terrace 1) to the pipeline (Terrace 5), and others are also clearly visible lower down towards the valley floor. When exactly this physical modification of the topography was undertaken is difficult to determine. From our excavations we can ascertain that some of the prehistoric buildings were themselves terraced with their back wall built up against the mountain slope, but we cannot say at this stage whether the mountain slope was first modified at the same time, in the late fourth millennium BC.

³⁸ Gogochuri and Orjonikidze 2010, pp. 110, 132.

³⁹ Mindorashvili 2010, pp. 502–525.

⁴⁰ Licheli 2010, pp. 526–546.

⁴¹ Licheli and Rusishvili 2010, pp. 205–228.

⁴² Burdiladze 2010, pp. 74–82.

The eastern knoll (our 2012 Upper Operation) appears to have been artificially levelled, too. Known as ‘Satikne’ by the locals, it is marked by a modern cross, which has been erected not far from the place where the villagers frequently sacrifice animals on the Day of the Ascension. Remnants of a fortification wall, in the form of irregular field-stones, run along the south-eastern edge of the summit, indicating that substantial defensive structures must have once crowned this part of the site. Within the fortification walls, on top of the hill, stone foundations of rectilinear structures protrude from the surface. A Soviet military trench, dug in 1956 along the inside of the fortification wall, afforded the clearest indication of the built environment in this area prior to our excavations. The trench exposed dry set, stone-walls several courses high.

Looking down from the ancient site, it is possible to see a number of small mounds dotting the landscape beyond the pipeline. Some of these mounds may well be barrow burials (*kurgans*), given they are sprinkled across the valley floor around the village of Zveli and in the high pastures (*yayla*) above Chobareti village, about 2.5 km directly opposite the site to the south.

Excavation and Post-Excavation Methodology

(*Antonio Sagona*)

The Chobareti project adopted a flexible methodology when it began. At the outset this was determined largely by the fact that the site is located along the corridor of a gas pipeline and therefore was initially tailored to the restrictions of salvage operations. In 2009, attention was focused on the damaged features exposed by the pipeline cutting. The principle aim was to record and excavate the pits, tombs and buildings that were cut and clearly delineated in the corridor wall. Two years later, four 5 × 2 m trenches were opened on the saddle to test the extent of the site and determine its suitability for a fully-fledged research project (Fig. 2). In addition, trench numbers were assigned retrospectively to the 2009 features, resulting in a tally shown in Figure 3.

Feature	2009 Trench	2011 Trench	2012 Square
Structure 1	Trench 6		
Structure 2	Trench 16		
Structure 3	Between Trenches 11 & 12		
Pit 1	Trench 6		
Pit 2	Trench 7		
Pit 3	Trench 9		
Pit 4	Trench 11		
Pit 5	Trench 10		
Pit 6	Trench 10		
Pit 7	Trench 11		
Pit 8	Trenches 11–12		

Feature	2009 Trench	2011 Trench	2012 Square
Pit 9	Trench 12 (Terrace 5)		
Pit 10	Trench 13		
Pit 11	Trench 16		
Pit 12	Trench 17		
Pit 13	Trench 6		
Pit 14	Trench 12		
Pit 15	Trench 6		
Burial 1	Trench 8		
Burial 2	Trench 12		
Burial 3	Trench 17		
Burial 4	Trench 17		
Burial 5	Trench 17		
Burial 6	Trench 5		
Burial 7	Trench 11		
Burial 8	Trench 6		
Burial 9	Trench 4		
Pit 16		Trench 1	
Pit 17		Trench 1	
Pit 18		Trench 1	
Stretch of wall		Trench 2	
Stretch of wall		Trench 3	
Structure 4	Structure 4	Structure 4	F42 & G42
Fortification wall			B48
Rectilinear building(s)			D49 & D50
Cultural material, but no discernable floor			N49.1
Cultural material, but no discernable floor			L47.4

Fig. 3. Chobareti. A list of features discovered in the 2009, 2011 and 2012 excavations.

In 2012 the methodology changed. In the first instance, a uniform grid of 10 × 10 m was laid across the site. These grid-lines are labelled west to east by letter and south to north by number. Each square is further sub-divided into four 5 m squares (.1,.2,.3,.4 from the north-west corner in a clockwise direction). Each minor square, D50.3, for instance, formed the initial, stratigraphic designation of all finds.⁴³

⁴³ Barker 2003; Roskams 2001.

A structured approach is used to record information during excavation and in the post-excavation process. This was reinforced, in 2012, by the use of recording sheets pre-printed on archival (acid free) paper, sand-coloured to cut down glare, which were stitch-bound into hard-cover notebooks. While it is common practice to use individual sheets on site, we have found that sheets are less likely to be damaged if they are bound together, they will not fly away in the wind, and they do not need to be continually ordered into a sequence. Moreover, bound notebooks can better accommodate daily images of excavated features that complement the descriptions and sketch plans.

The design of the notebooks is shown in **Figure 4**. Each Locus/Stratigraphic unit is recorded on two double-sided sheets of paper, which contain the core elements of stratigraphic excavations, including Area, Square, Locus/Stratigraphic Unit [SU], space for a detailed description of the Locus (written in English and Georgian), and a listing of pottery bags, objects, and samples (organic and inorganic) pertinent to the Locus. The stratigraphic relationship of that Locus with surrounding loci is also noted following the principles of the Harris Matrix. A day plan is always drawn, and photographs of the trench and/or loci are taken daily and included in the notebook at the end of each day. Our notebooks also have pages designed specifically for burials, used successfully in our earlier excavations at Samtavro cemetery. Locus sheets are signed and dated by the interpreter. Georeferencing digital vertical photographs and tracing off relevant features using AutoCAD produced the 2012 trench plans (**Figs 22, 27**).⁴⁴

Labels (the tough, acid free Tyvek variety) also contain the core stratigraphic criteria, unique numbers that, as in the notebooks, are visually distinguishable: Locus numbers are boxed in a rectangle, pottery bag numbers are encircled, and sample numbers are prefixed with 'S'. Each label is dated and initialled. Details of all artefacts, pottery fragments and samples are uploaded on respective databases. Pottery fragments are, in the first instance, categorised according to ware types, and then further sub-categorised using a range of criteria (see Catalogue, below). All pottery sherds are counted and weighed, and important diagnostic pieces are drawn. Certain fragments, which bear important elements and taken out of the bags (after being counted and weighed), are given individual numbers. These are listed as SPF (Special Pottery Find). Our long-term aim is to develop a comprehensive ceramic sequence for the Samtskhe-Javakheti region based on excavation and survey data.⁴⁵

Field Results

(Kakha Kakhiani and Antonio Sagona)

In view of the varied methodology adopted at Chobareti over the 2009, 2011 and 2012 excavations, ranging from rescue operations to research-focused investigations, it is best here to summarise the annual results independently. Only one feature, Structure 4 (named in 2009), has been investigated

⁴⁴ We wish to thank Cliff Ogleby for rectifying and georeferencing the aerial photographs, and Mia Hutson for producing the drawings.

⁴⁵ Finds from the Chobareti excavations are housed at the Otari Lordkipanidze Centre for Archaeological Research (Tbilisi), and the recently re-furnished Akhaltsikhe museum.

in each of the three years. It is discussed in the 2012 summary below. In future field seasons, we will continue the grid system established in 2012.

LOWER OPERATION: THE SADDLE

The 2009 Investigations

In 2009 salvage operations focused on the following features most of which were exposed by the pipeline cutting: the partial remains of four buildings, fifteen pits, nine tombs. These features are located on the saddle and the pits and Structure 4 can be attributed to the period 3300–3000 cal BC on the basis of eleven radiocarbon readings, discussed below. We have no absolute dates for the burials as yet, but it is worth noting the black and red vessels found among the few ceramics containers recovered. Given that the ceramics from Structure 4 and the pits are predominately pale brown in colour, it is possible that some of the burials are of a later date, following a recent view that the concept of the black and red firing was introduced into the southern Caucasus.⁴⁶ Moreover, the type of decoration on the ceramics, rare though it is, also hints at two different periods. The pale brown vessels have the occasional incised pattern scratched on its surface after firing (Figs 30: 1; 53: 1; 55: 1), and also solid knobs, some with a central depression (Fig. 30: 5, 7). A black and red jar found in Burial 8, on the other hand, has an impressed design of oblique lines and dimples on its neck and shoulder (Figs 32: 4; 53: 6). After a substantial amount of data on the ceramics has been gathered, we will also investigate if there are any functional differences between the two Kura-Araxes assemblages.

Buildings

Each of the four buildings was badly damaged, either by erosion or the pipeline cutting, making it almost impossible to determine accurately their size. Even so, enough has survived to establish that they were terraced structures, built into the slope of the land in such a way that the roof of the lower building provided a porch for the upper structure. Tariel Chubinishvili reported rectilinear terraced buildings from his 1950s excavations at Amiranis Gora, about 2.5 km north-east of Akhaltsikhe, though his published plans are not very clear.⁴⁷

Structure 1 lay 50 cm below the modern surface (Fig. 5). It was part of a dwelling with a well-trodden earthen floor, yellow-brown in colour, 2–4 cm thick. A 4.3 m stretch of the floor survived, running from east to west, darkened in parts by a violent fire that consumed the building. The floor was bounded along its northern edge by a stone wall. Built up against an earthen face in a terrace fashion, the stone wall was one course wide (ca. 30 cm), and a stretch 1.5 m in length was preserved; its height survived no more than 40 cm. Stones from the structure's collapsed walls were found strewn across the floor, mixed with pottery sherds, bones of small and large animals, fragments of lime plaster and the occasional chunk of charcoal. A pit (no. 13) was dug into the southeast corner of the floor and found covered with substantial slabs of stone. Among its content was a near complete hemispherical bowl (Figs 40: 5; 54: 6).

⁴⁶ Kiguradze and Sagona 2003, p. 93; Palumbi 2008, fig. 6.61.

⁴⁷ Chubinishvili 1963.

At about the same depth below the surface was Structure 2, also terraced into the hill (Fig. 5). Only a small portion of the building remained, having been mostly destroyed by the pipeline cutting. Its rear wall was better preserved than that of Structure 1, and built of small basalt stones laid upon a whitish surface of virgin soil. Pit 11, also damaged, was situated at the eastern end of the wall and filled with charcoal, ash, animal bones and ceramic sherds.

Another building (Structure 3) was situated on Terrace 4. It lay beneath the pipeline, making it unsafe to excavate properly (Fig. 6). What survived indicated that it was originally a substantial structure. The rear (northern) wall was stone built, two or three courses wide, and survived to a height of 1.3 m; it measured 3.7 m in length. Portions of side-walls, 60 cm and 70 cm in length, were also recovered, suggesting that the original plan of the building was probably rectangular. On the floor close to the edge of the scarp, were a number of ceramic sherds. Behind the back wall, higher up the slope, were three pits (nos 7, 8, and 14) and Burial 7.

Pits

A distinctive characteristic of Chobareti is its number of pits. Apart from Pits 11 and 13, which are associated with buildings, the rest are situated on Terrace 5 (Pits 2, 3, 5–11, and 14) and the lower Terrace 4 (Pits 1, 4, 12–13, and 15). Although we might be tempted to attribute the fill of all these pits to ‘rubbish’ — material which is discarded because it has little use, cannot be recycled, or has the potential to be a hazard — we have to be mindful that pits in antiquity may well have served purposes other than as the repository of refuse. There are two basic approaches to the study of rubbish. One conforms to our Western rationality and interprets it from a functionalist perspective, as part of discard behaviour.⁴⁸ Another more recent approach maintains that certain objects, once they leave the household domain, may still carry meaning for the living community. These objects do not conform to our notions of ‘rubbish’ (unwanted waste), but are disposed in a structured and purposeful manner.⁴⁹ Essentially, this approach moves away from modern perceptions of rubbish as a material category that is totally separated from the social processes of the living. It also calls into question the distinction that is often made by archaeologists between ‘secular’ and ‘sacred’, and ‘practical’ and ‘ritual’, arguing that in certain societies these distinctions are meaningless.⁵⁰

Although, we only have a limited number of pits from Chobareti most of which have been damaged, it is worth considering that they might well have been purposefully dug for reasons other than waste, or simply for the storage of grain, and that their deposits were deliberately structured. This could explain the number of intact vessels in Pit 4 (Fig. 36: 3–6), a projectile point (Fig. 36: 2) knapped from obsidian (a rare commodity at Chobareti), animal bones, and even the considerable quantities of ash. Perhaps most poignant of all is the reuse of Pit 12 as a burial, and the superimposition of Burial 8 on Pit 15. It can be argued that pits experienced cyclical depositions of objects, which once had ‘social lives’ within the households.⁵¹ Moreover, this ‘disposal’ of objects, especially through burning, might be viewed as a transformative act, part of the social

⁴⁸ See, for example, the seminal, processualist studies by Schiffer (1987).

⁴⁹ Chapman 2000; Martin and Russell 2000; see also Nekhrizov and Tzvetkova 2012.

⁵⁰ Brück 1999.

⁵¹ Appadurai 1986.

practices of the ancient community.⁵² Thus, the life of a pit — from its creation through the deposition of its fill to eventual burning — can be viewed as its rites of passage. This interesting question of the nature of ancient discard behaviour need not detain us here, suffice to say that as time progressed, pit-digging in the southern Caucasus increased and became very widespread, reaching a climax in the second half of the third millennium BC during the Bedeni horizon.⁵³

For now, we list the Chobareti pits, their dimensions and contents, leaving a more detailed analysis of their purpose for a future study. Details of illustrated diagnostic finds are listed in the Catalogue at the end of this paper. A complete quantitative analysis of the pottery sherds from the pits will be provided in a future report.

Pit 1 (Fig. 7): located 35–40 cm below the surface, may well have been associated with Structure 1; about a third of the pit survived and was situated beneath a cluster of stones, some quite large; pear-shaped in section and its upper part was cut away; originally dug into pale brown soil speckled with small stones; a fill of ash, charcoal, cattle bones, and pottery sherds (Fig. 35), including a black burnished tall necked jar (Figs 35: 3; 54: 2); a scatter of medium-sized stones at its base; dimensions: 90 cm (pres. neck diam.), 1.40–1.50 m (pres. base width 60 cm), and 1.10 m (depth).

Pit 2 (Fig. 7): badly damaged, around 50–60 cm below the surface; pear-shaped, it was originally cut into a stony, white matrix, which lies immediately below the dark brown topsoil; discoloured in the lower half from burning; full of ash that was mixed with charcoal, pieces of basalt and pottery sherds; dimensions: 70 cm (pres. neck diam.), 1.30 m (base diam.), and 1.4 m (pres. depth).

Pit 3 (Fig. 7): pear-shaped, located 35–40 cm below the surface; contained some ashy soil, several ceramic sherds, and a broken, translucent grey obsidian projectile point (Figs 36: 2; 54: 3); dimensions: 70 cm (pres. neck diam.), 1.50 m (pres. base diam.), and 80 cm (pres. depth).

Three pits (4–6) were found in close proximity to each other. Pit 4 (Fig. 8): cylindrical, widening slightly at the bottom; badly damaged by the cutting, it was found at a substantial depth of 2.5 m below the surface; five near complete or intact ceramic vessels (Figs 36: 3–6; 54: 1, 4) — including a handle jar with an incised design pendant from the shoulder — were deposited in the pit; the pit was also full of ash, cattle bones, charcoal pieces, pot sherds from a variety of forms, including trays (Fig. 37: 4, 5) and lids (Fig. 38: 2), hearth fragments (Fig. 38: 1, 3), both portable and fixed circular hearth, and a few slabs of basalt were placed at its base; dimensions: 1.20 m (pres. neck diam.), 1.40 m (pres. base diam.), and 1.30 m (pres. depth).

Pit 5 (Fig. 8): located at a depth of 60–70 cm below the surface on Terrace 5; though damaged, its form was clearly pear-shaped; contained ashy soil, charcoal pieces, bone fragments of large domestic animals, ceramic sherds (Fig. 39: 1, 3), and a portable hearth fragment with an incised design (Figs 39: 2; 54: 5); dimensions: 80 cm (neck diam.), 1.10 m (base diam.), and 1.10 m (depth).

Pit 6 (Fig. 8): also situated on Terrace 5, at a depth of 60–70 cm; cylindrical in form, narrowing slightly at the neck; its cross section revealed stone slabs that sealed the opening; it cut through two soil deposits — its mouth belongs to the dark topsoil, whereas the bulk of the pit

⁵² Stevanović 1997.

⁵³ A good example of intense pit digging is the site of Berikldeebi, in Shida Kartli, where no less than 233 pits were exposed. See, Djavakhishvili 1998; Mindia Jalabadze and Antonio Sagona are preparing a final report on Berikldeebi.

was dug into a deposit of whitish soil; a layer of small stones defines the juncture between the two deposits; contained some ash, charcoal pieces, cattle bones and pot sherds; dimensions are: 60 cm (neck diam.), 1.10 m (base diam.), and 1.70 m (depth).

Pit 7 (**Fig. 9**): bell-shaped, located at a depth of 35–40 cm; replete with mixed debris of ash, small pieces of basalt and pot sherds (**Fig. 39: 4–9**); dimensions: 90 cm (neck diam.), 1.20 m (base diam.), and 1.00 m (depth).

Pit 8 (**Fig. 9**): unusually deep, reaching 1.75 m in depth, 40–60 cm below the surface; cylindrical in form, its opening was sealed by a number of stones; fill of ashy soil and pot sherds (**Fig. 40: 1**); dimensions: 90 cm (neck diam.), 1.11 m (base diam.), and 1.75 m (depth).

Pit 9 (**Fig. 10**): shared attributes with Pit 6 — cylindrical with a splayed mouth; found at a depth of 1.10 m below the surface; contained ashy soil mixed with cattle bones, pot sherds, and fragments of a horse-shoe-shaped stand; dimensions: 1.05 m (neck diam.), 75 cm (base diam.), and 90 cm (depth).

Pit 10 (**Fig. 10**): cylindrical, badly damaged; located at a depth of 70 cm; filled with an ashy, stony soil, which formed a distinct band in its cross section; dimensions: 1.45 m (diam.), and 1.20 m (depth).

Pit 11 (**Fig. 10**): cylindrical; only the base was preserved, and measured 60–70 cm in diameter and 26–27 cm in depth; located 70–90 cm below the surface; filled with animal bones and a cluster of pottery sherds (**Fig. 40: 2–3**) along its western side.

Pit 12 (**Fig. 10**): located at a depth of 3 m below the surface on Terrace 4; approximates a circle, with a 1.20–1.30 m diameter; re-used as a tomb (Burial 5); contained a deposit of ashy soil about 80 cm to 1 m thick; a paving of broken pottery sherds provided a surface on top of which lay the skeletal remains of an individual; other fragments probably belonged to the original deposition in the pit (**Fig. 40: 4**).

Pit 13 (**Fig. 11**): associated with Building 1; pear-shaped; slabs of basalt covered its opening; contained several fragments of basalt, some ashy soil, animal bones, and a damaged hemispherical bowl (**Figs 40: 5; 54: 6**) and decorated lid (**Fig. 40: 6**); dimensions: 50 cm (neck diam.), 70 cm (base diam.), and 90 cm (depth).

Pit 14 (**Fig. 11**): drop-shaped, rather narrow compared to its depth; located on Terrace 5; a heap of small stones, measuring 8.5 cm in diameter, rather than slabs sealed its mouth; filled with ashy soil, animal bones and pottery sherds (**Fig. 40: 7**); dimensions: 85 cm (neck diam.), 80 cm (base diam.), 1.80 m (depth).

Pit 15 (**Fig. 11**): pear-shaped; bore traces of a violent fire; found beneath Burial 8; originally cut into brown stony soil; filled with grey ashy soil, chunks of charcoal, animal bones and pottery sherds.

Burials

Of the nine burials uncovered in the course of the 2009 excavations, seven were stone cist tombs (Burials 1–4, 6–8). Burial 5 was placed inside a re-used circular pit (Pit 12), not an uncommon practice, whereas Burial 9, a jar burial placed beneath the floor of Building 5, is an unusual custom.⁵⁴

In building the stone-walled tombs, a pit was dug into the earth and their walls were constructed with basalt rocks of varying sizes, laid horizontally in the dry stone technique. The top of the tombs were sealed with short timber beams and covered with stone slabs. All tombs had an

⁵⁴ For the re-use of pits, see Abramishvili *et al.* 1980, pp. 85–88 (Ghramakhevistavi), Sadradze *et al.* 2007, p. 31 (Tserovani).

entrance, located either on the eastern (Tombs 1–3, 7 and 8) or southern side (Tomb 4), blocked by a substantial slab of stone, which was removed if other occupants had to share the space at a later time. Tomb 2 was the only example of re-use. The remains of earlier individuals were pushed aside, unceremoniously it seems, and the recently deceased was placed in a crouched position. The dimensions of the tombs varied, and generally fell within the following ranges: 1.3–2.5 m (length), 1.1–2.0 m (width), and 110–80 cm (depth). No preference is shown in orientation in any of the tombs, with individuals placed either on their right or left sides, and heads pointing east (Burials 1–3, 8), south (Burial 4), or north (Burial 7). Grave goods were modest. Burial 1, for instance, yielded a ceramic vessel and a spindle-whorl, Burial 4 a spindle-whorl, and Burial 8 a jar. Attention should be drawn, though, to the practice attested in Burials 2, 5 and 8 of paving the earthen floors with fragments of large ceramics containers, presumably part of a specific burial rite.⁵⁵

Burial 1 was well constructed with medium-sized basalt field-stones of varying thicknesses and sizes (Fig. 12). The stones were laid horizontally in a dry stone manner and small stones filled the gap between the tomb walls and the earthen pit. The pipeline cutting damaged the tomb's southern part and roofing, but its dimensions could be easily determined: 2.1 m (length), 1.3 m (preserved width), and 1.3 m (depth). The tomb was orientated along an east-west axis. An upright, basalt slab, resting on an oblong stone laid horizontally, placed on the inside of the chamber, served as the entrance; a small pit lay beneath the threshold. This combination presumably facilitated the removal of the slab. Another small pit was dug against the northern wall. The tomb belonged to a male about 30–35 years old.⁵⁶ He was placed on his right side with head pointing east, and accompanied by a red and black ceramic container and a bone spindle-whorl, both facing the deceased (Fig. 31: 4–5).

Burial 2 resembled Burial 1 in some of its features (Fig. 13). It was built with basalt field stones, which were generally more uniform and larger in size than those used for Burial 1. This tomb was cut into the whitish matrix that lies beneath the brown top soil and it was also orientated east-west. Although the modern cutting damaged its southern side, its dimensions were evident: 2.5 m (length), 1.8 m (preserved width), and 90 cm (depth). Its roof comprised slabs of stone supported on the sidewalls and partly on wooden beams, judging by traces of wood found in the fill. An upright slab and a horizontal threshold comprised the tomb's entrance. Four individuals were buried in this tomb. Two males, about 20–25 years and 50–55 years old, were probably the earliest occupants. Their remains were pushed into the north-west corner when the third individual, a 25 year old male, was laid to rest. Shortly after burial his remains were moved to the western part of the chamber. The articulated nature of some of the bones, suggest that certain ligaments were still intact, and the body had not decomposed fully. The last individual to be placed in the tomb was a female (40–45 years old). She was found in the north-east corner of the tomb, lying on her left side, in a crouched position, with head pointing to the east. The earliest burials were laid on a floor of ceramic sherds, which, like the bones of the deceased, were shoved aside. The sherds on the floor belonged to ovoid-bodied jars (Figs 31: 7, 53: 3; 32: 1), which may have been purposefully broken.

⁵⁵ The practice of paving floors with ceramic sherds is also attested at Sos Höyük VA and İkiztepe, where they were used in domestic contexts, see Sagona and Sagona 2000, p. 60; figs 32–33.

⁵⁶ L. Bitadze determined the sex of individuals at Chobareti.

Burial 3 recalls some of the same constructional features (Fig. 14). Its walls were with two courses of large, well defined rectangular stones. An upright slab sealed the entrance. The roof was a combination of horizontally laid narrow stone slabs and wooden beams. Orientated along a north-east to south-west axis, the pipeline cutting damaged the tomb's southern side. The tomb was found 35–40 cm below the surface, and its preserved measurements are 1.8 m (length), 1.1 m (preserved width), by 85 cm (depth). The skeletal remains were of a juvenile, lying on his left side, with head pointing to the north-east. No grave goods were found in the tomb, though they might have been placed there originally.

Burial 4 was asymmetrical in plan, conforming approximately to a rectangle, orientated south-east to north-west (Figs 14–15). It was found at a depth of 70 cm. Despite damage to its southern side, its size could be discerned: 1.35 m (length), 1.0 m (preserved width), and 1.0 m (depth). Unlike the other tombs, its entrance was situated on its southern side. The walls of the tomb were dry set with field stones of varying sizes. A 30–40 years old male was placed on his right side, in a crouched position, with his head pointing to the south-west. The only object found in the tomb was a bone spindle-whorl placed behind individual's back (Fig. 31:6).

Burial 5 was placed in Pit 12, which measured about 1.2 m in diameter (Figs 14–15). A 30–35 years old male was placed in a crouched position on a floor of pottery fragments, with his head pointing north. Beneath the sherds was around a metre of ashy soil. The deceased was not buried with any grave goods.

Burial 6 was almost completely destroyed, except for a small portion along its northern edge, found at a depth of 1.2 m (Fig. 16). The tomb was built of small basalt stone and was empty of grave goods. Its preserved dimensions were 90 cm (width) and 35 cm (depth). The skeletal remains were in poor condition and did not enable the age and sex of the individual to be determined.

Burial 7 conforms to the same plan and mode of construction as the other stone-built chambers (Fig. 16). It was rectangular and built of medium-sized basalt stones. Its roof was damaged, but was presumably built with a combination of horizontal slabs and wooden beams. An upright slab positioned within its north-north-east wall formed its entrance. Inside were the remains of a 5 years old child, laid to rest in a crouched position, with head pointing to the north-north-east. There were no accompanying grave goods in the tomb. Tomb dimensions: 1.4 m (length), 1.1 m (width), and 70 cm (depth).

Burial 8 was generally well preserved. Its walls were built with a combination of upright slabs of basalt, horizontally laid slabs and an in-fill of smaller stones (Figs 17–18). Rectangular in shape its roof comprised two large slabs laid horizontally, originally supported by a beam or beams. Its orientation was east-west, and it was located at a depth of 75–80 cm. In size, it conformed to the general range — 1.5 m (length), 1.1 m (width) and 90 cm (depth). A large upright slab, resting on a long stone, and supported on the outside by another, sealed the entrance. The skeletal remains of two females were found in the tomb. One (40–45 years old) had been pushed into the north-west corner of the tomb, whereas the more recent interment, a 30–40 years old, was found on her right side, with head pointing to the east. The floor of the tomb was paved with pottery sherds. That the sherds were mostly reconstructed into whole vessels suggests that they were possibly broken for the burial (Fig. 32: 2–3). An intact ceramic container was placed in the north-east corner of the burial (Figs 32: 4; 53: 6).

Burial 9 represents an unusual mode of interment that does not conform to the Kura-Araxes tradition (Figs 19; 24: 2). It was a jar burial, placed beneath the floor of Structure 4, near its north-west wall. The vessel had a pair of loop handles linking shoulder to neck (Fig. 33: 1). Although the southern side of the burial was damaged, the burial could be clearly distinguished — a child about a year old, placed on its left side, in a crouched position, with head pointing to the north-west. There were no grave goods. Infant jar burials in the south Caucasus are not common. They have been found, among other sites, at Ovçular Tepe, in Nakhichevan, where one burial (Locus 17002) also yielded three copper axes, at Böyük Kesik and Leyla Tepe in Azerbaijan, and at Berikldeebi V2, in Shida Kartli.⁵⁷ In all cases, their context is clearly Late Chalcolithic. Moreover, the associated material culture — Chaff-Faced Ware, rectilinear mudbrick architecture, and even the use of stamp seals — is generally taken to reflect intrusive influences from north Syrian and Upper Mesopotamian region.

The 2011 Investigations

Four new trenches each measuring 5 x 2 m were opened in 2011 (Fig. 2). In addition, excavations resumed on Structure 4, begun in 2009. Trench 1 lies 7 m north of the pipeline and is oriented north to south. A 10 cm thick layer of turf and topsoil was followed by a matrix of brown-blackish soil and small pebbles. Medium and large size basalt stones (in size 10–20 cm) came to light at the depth of 80 cm, but comprised tumble, conforming to no coherent plan (Fig. 20). Then followed a white-greyish layer, comprising an eroded deposit above the bedrock. Below this layer, in the central and western parts of the trench, at the depth of a meter, was a cultural, ashy deposit comprising small stones and pottery fragments characteristic to the Kura-Araxes culture. Three basalt stones were aligned in the middle of the trench, near its eastern wall at the depth of 1.15 m. Two of them were lying directly on the bedrock, whereas the third one was in the southern part of the trench partly lying over the ashy deposit. This third stone was positioned over Pit 16, which was full of ashes. The pit was ovoid, widening to the north — it was impossible to fix the southern part of the pit because Pit 17 had cut it — where it reached a depth of 60 cm. Its western and eastern sides yielded a charcoal layer; no ceramic sherds were found in the pit. Pit 17 cut Pit 16. Although the precise shape of the Pit 17 could not be determined, it was approximately 1.0–1.2 m deep, along the eastern flank of the trench, and had a base that measured one metre in diameter. The pit contained a matrix of charcoal pieces, an ashy layer and pottery sherds. Pit 18 was further down, located at the depth of 2 m within the southern side of Trench 1. It was ovoid in shape and at least 30 cm deep; it was impossible to explore it further because of its position within the trench.

Trench 2 lay 81.5 m to the north-east of Trench 1. It was oriented north to south. Several stones, aligned along an east-west axis, appear to have been purposefully placed there (Fig. 20). Following the removal of topsoil, small- and medium-sized stones were encountered at the depth of 30 cm. Associated with this deposit was a stretch of a wall, comprising a single course of five stones oriented from west to east positioned in the southern part of the trench. Kura-Araxes body sherds covered parts of the floor.

⁵⁷ Marro *et al.* 2011: 70, photo 14 (Ovçular Tepe); Akhundov 2007: fig. 4 (Leyla Tepe); Museyibli 2007: figs 10–12 (Böyük Kesik); Djavakhishvili *et al.* (forthcoming) (Berikldeebi). In contrast to the southern Caucasus, infant jar burials are a common feature in Upper Mesopotamia, as is seen at Tepe Gawra, east of the River Tigris (Peasnell 2002 fig. A.6).

Another section of a wall appeared in Trench 3. It consisted of five elongated stones in the middle of the trench, about 30 cm below the topsoil (Fig. 21). The wall ran from west to east and was 20 cm wide, rising up to 40 cm in height. The second stone from the west was tall and tapered, protruding the modern surface. An ash layer, a metre thick and 65 cm wide, ran along the wall. It contained a considerable quantity of Kura-Araxes pottery fragments, including diagnostic pieces. Owing to the steepness of the slope, part of this cultural layer had been washed away.

After the removal of a 20 cm layer of topsoil in Trench 4, excavators encountered a layer of brown-blackish soil, which comprised a mixture of small- and medium-sized stones, pottery sherds, and bone fragments of large domestic animals (Fig. 21). No traces of any structures were found in this trench.

The 2012 Investigations

The main focus on the saddle was in Squares F42 and G42, where excavations continued in Structure 4, a large stone building first exposed in 2009 (Figs 22–24). Structure 4 was not the first feature encountered. Above it, relatively close to the surface (Locus 100), was a band of stones averaging around 3.0 m wide (Locus 102), which ran obliquely from the northwest corner to the southeast of the trench. There is no observable preference for rock sizes, which varied from $27 \times 24 \times 8$ cm to $16 \times 16 \times 7$ cm. The stones were set in brown soil, about 20 cm below the surface. Beneath this stretch of stones was a layer of greyish white matrix (Locus 101), an eroded deposit of limestone that covers the bedrock. What purpose this band of stones served remains unclear, though it is suggestive of a pathway. That the stones effectively sealed some of the foundations of Structure 4 indicates the path must have been laid after 3000 cal BC, but a more precise date is not possible at this stage.

Although the southern half of Structure 4 was dug away when the pipeline corridor was constructed, its dimensions remain sizeable — the length is no less than 9 m and its maximum preserved width measures 1.50 m. The whole structure is set into the slope of the hill. Its north wall is built up against an earthen face and comprises a dry-stack of small- and medium-sized field rocks, carefully selected with one flat surface. The wall is 20–30 cm thick, but well preserved to a maximum height of 1.4 m. Unlike the other terraced structures (nos 2 and 3), though, this substantial wall is not straight. Rather it curves noticeably, suggesting that the original plan may have been pear-shaped or even drop-shaped. Two shorter, internal walls compartmentalise the interior space. The easternmost wall is solid and two courses thick (plugged with smaller stones), whereas the other wall is hollow, comprising a pair of parallel stones, some set upright, separated by a gap (Locus 105). The purpose of this hollow feature is unclear, and probably served as a niche rather than a wall. A concentration of cereal grains and a basalt saddle quern are good indications that the area around the hollow feature was used to process food.

The floor in the eastern half of Structure 4 has yet to be reached, but the soil above it is a loose, greyish-brown matrix (Locus 103). A stone-built hearth associated with neck fragments of a large pot were positioned in the western side. Nearby, a small stone platform abutted the north-western side of the wall. Scattered across the earthen floor was occupational debris, including pottery sherds, fragments of horse-shoe-shaped andirons (portable hearths; Figs 28; 29: 1; 43: 5, 54:5), and a stylised horned animal moulded from clay (Fig. 29: 2). Beneath the

floor, beaten to a hard surface and measuring 2–3 cm thick, lay a jar burial of a child (Burial 9), discussed above.

Another interment (Burial 10, Locus 106), a small, stone-lined cist grave, was located just outside the building (Fig. 25). Only half of the tomb is left, damaged when the pipeline corridor was cut, but enough survives to ascertain its shape — a rectangle with rounded corners. Its walls were constructed from stones of different sizes, some placed upright. No grave goods were found, presumably destroyed when the grave was cut, and the only skeletal material was a cattle *Phalanx* bone.

Terraced, stone structures, generally single-roomed and rectilinear in plan, have been found elsewhere in Georgia. They appear at Tetrtskaro, Samshvilde, Abastumani, Amiranis Gora at Akhaltsikhe and Akhalkalaki to mention a few.⁵⁸ However, the curved wall at Chobareti is unusual and recalls the building at Tetrtskaro and the curved wall at Samshvilde.

Two other squares were opened on the saddle in 2012 — N49.1 and L47.4. Although N49.1 registered considerable anomalies in the GPR analysis and yielded cultural material, it did not contain any discernable floor.⁵⁹ It mostly comprised a tumble of large rocks in the eastern half, associated with black earth (Locus 300). Square L47.4 fared little better, though it did produce a concentration of small stones (Loci 201 and 202), suggestive of the stone formation in Squares F42 and G42, but nowhere as large or distinctive.

UPPER OPERATION: THE CITADEL

In 2012, we also began investigations in the Upper Operation, where an unimpeded view of the surrounding countryside is afforded in all directions. We focused on two areas: Squares B48 and D49/D50. Square B48 is situated on the edge of the Upper Operation, and incorporates a segment of the stone fortification wall, which curves around the summit. Much of the season was spent clearing the debris (Locus 501) that had accumulated in the Soviet military trench dug on the inside of the fortification wall (Fig. 26), and articulating the wall itself (Locus 505). Measuring approximately 2 m wide, the fortification wall is rubble-filled and edged with large field rocks; those on the outer edge are about 50 cm in length, whereas the stones on the interior face are smaller. The superstructure of the defensive system would have risen above these stone foundations. Judging by the lack of any mud brick debris, it was most likely a wooden construction, perhaps in-filled with mud. Against the outer face of the fortification wall, about 80 cm below the top of the rubble, a series of large flat stones (Locus 510) were carefully positioned as reinforcements.

Inside the fortification wall, another wall also quite large (Locus 504) abuts it at right angles. This appears to be a later addition, though its stratigraphic relationship to the main perimeter wall must await further clearance. In the northern half of Square B48, bedrock protrudes the surface and slopes sharply towards the wall. A rubbly layer of small stones (Locus 501) lay immediately below the grassy surface and was mixed within a matrix of black soil. The stones appear to be deliberately laid to create a surface, but again its exact function and date, as well as its stratigraphic

⁵⁸ Gobedjishvili 1978, p. 18; Mirtskhulava *et al.* 1998, pp. 71–72; Chubinishvili 1963, pls 2–3; Ordjonikidze 2004, fig. 23.

⁵⁹ The Ground Penetrating Radar prospection results will be discussed in a subsequent report.

relationship with the main fortification wall (disrupted by the Soviet trench) remain uncertain at this stage. One thing is clear, namely, the ancient builders made use of the bedrock as a solid foundation for the construction of walls (Locus 502) and also exploited its naturally formed depressions as niches.

In Squares D49 and D50, our main objective was the removal of turf to expose stone foundations very close to the surface (Locus 400). Juxtaposed five metre squares were cleared to reveal a number of straight walls and corners, belonging to rectilinear structures (Locus 401), immediately to the north of the fortification wall. Although we have no overall plan as yet (Fig. 27), there are some features worth noting. In Square D50.3 the main foundations are about a metre wide, define on both sides by a row of large stones each with a flat surface aligned edge to edge, facing out, into a room. A rubble packing of small stones filled the core of these foundations. On either side of the foundation wall, is the base of a 'platform', comprising small to medium-sized stones. The larger 'platform', on the northern side, is about 1.75 m wide. A considerable number of sherds mostly belonging to large containers were found on its surface.

RADIOCARBON DATES

(*Antonio Sagona*)

Reliable radiocarbon readings for the late prehistory and the early historic period of the southern Caucasus are still quite rare, when compared with other regions of the Near East and even the northern Caucasus.⁶⁰ A major objective of the Chobareti project is to establish a suite of dates from secure contexts. So far we have eleven readings from samples collected during the 2011 and 2012 seasons (Figs 28–38). Nine were analysed at the Waikato Radiocarbon Laboratory (New Zealand), whereas two were examined at Saclay Laboratory (France). All the radiocarbon samples were dated using Accelerator Mass Spectrometry (AMS). In these readings reliance has to be placed on samples of carbonised wood (twigs), which supplied eight of the readings. The other three were samples of charred seed remains. Given that these seeds were not single-entity samples and were found clustered together in secure contexts, there is no uncertainty attached to their taphonomy. Although the results of the grain samples are quite consistent and from the same context, they nonetheless suggest that the dated material was not deposited as a single event but over two or possibly three very close events. The eight charred twigs are also from secure deposits. We are confident that in the years ahead further short-lived samples will be acquired, including bone, in the hope of providing as precise a chronology as possible.

The conventions for quoting radiocarbon dates and supporting information used here conform to the international standard known as the Trondheim Convention.⁶¹ These results are conventional radiocarbon ages.⁶² The calibrated date ranges have been calculated using a probabilities

⁶⁰ Chernykh 2011. A. Sagona is grateful to Fiona Petchley (Waikato Radiocarbon Laboratory) for reading this section on radiocarbon.

⁶¹ Stuiver and Kra 1986.

⁶² Stuiver and Polach 1977.

method at a resolution of one year and OxCal v4.1.7.⁶³ Accordingly, date ranges are quoted with the end points rounded to single years. Ranges are quoted at 68.2% and 95.4% confidence; the calibrated date ranges referred to in the commentaries are those with the highest probability for 95.4% confidence unless otherwise specified.

Looking at the eleven dates as a whole, it is very clear that they all fit comfortably within the last three centuries of the fourth millennium BC. The charred seeds date range is tighter than that of the charred wood. All three grain samples came from within the same general area, around the hollow wall ('niche') in the centre of the Square F42. One reading (Wk-34457) falls within the upper end of this time bracket (3338–3208 cal BC). The other two (Wk-34458 and Wk-34459) are closer to 3000 cal BC and appear to belong to a single event; they were associated with a fragment of a basalt saddle quern (Fig. 51: 2; 57: 3).

Wk-34451 4490 ± 33 BP (AMS measurement)

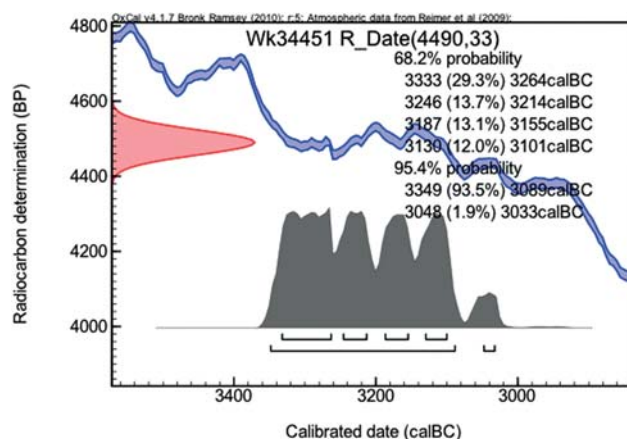
Sample: Chobareti 1, collected 25 August 2009, submitted in July 2012 by A. Sagona

Context: Building 3, floor level.

Material: charcoal

Calculated date: 68.2% probability 3333–3264 cal BC

95.4% probability 3349–3089 cal BC



Wk-34452 4470 ± 36 BP (AMS measurement)

Sample: Chobareti 2, collected 22 August 2009, submitted in July 2012 by A. Sagona

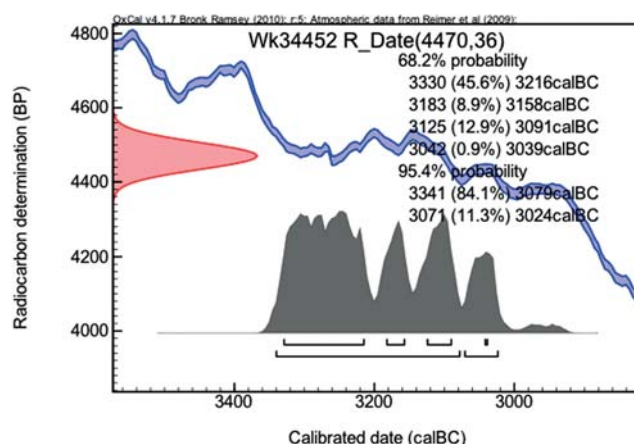
Context: One metre below the surface in Pit 7, Trench 11.

Material: charcoal

Calculated date: 68.2% probability 3330–3216 cal BC

95.4% probability 3341–3024 cal BC

⁶³ Stuiver and Reimer 1986; Bronk and Ramsey 2010.



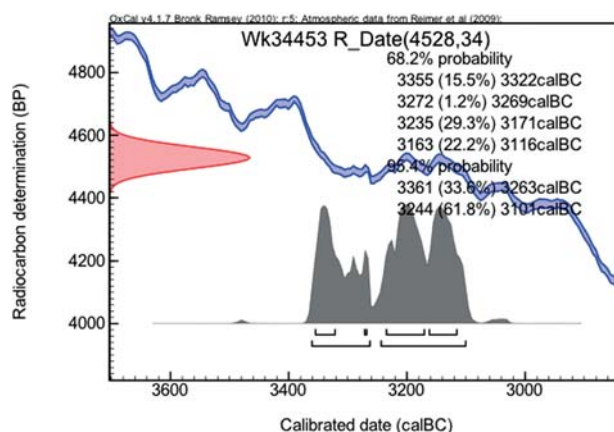
Wk-34453 4528 ± 33 BP (AMS measurement)

Sample: Chobareti 3, collected 23 August 2009, submitted in July 2012 by A. Sagona

Context: The base of Pit 13, 90 cm below the surface in Trench 6.

Material: charcoal

Calculated date: 68.2% probability 3235–3171 cal BC
95.4% probability 3244–3101 cal BC



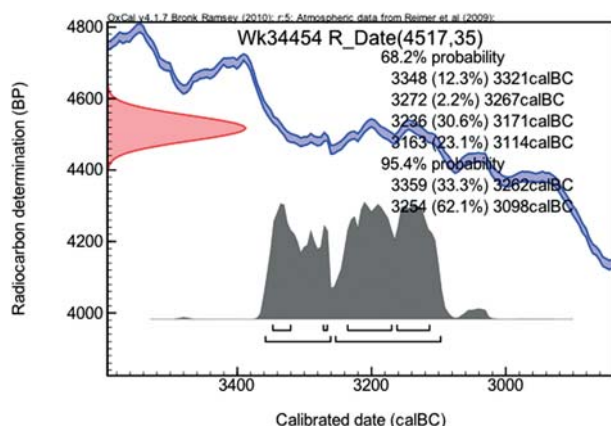
Wk-34454 4517 ± 35 BP (AMS measurement)

Sample: Chobareti 4, collected 27 August 2009, submitted in July 2012 by A. Sagona

Context: Base of Pit 14, 1.8 cm below the surface in Trench 12.

Material: charcoal

Calculated date: 68.2% probability 3236–3171 cal BC
95.4% probability 3359–3262 cal BC



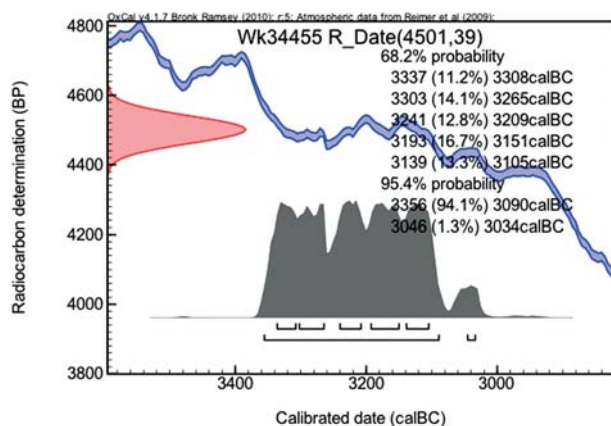
Wk-34455 4501 ± 39 BP (AMS measurement)

Sample: Chobareti 5, collected 27 August 2009, submitted in July 2012 by A. Sagona

Context: Base of Pit 7, 1.0 cm below the surface in Trench II.

Material: charcoal

Calculated date: 68.2% probability 3193–3151 cal BC
95.4% probability 3356–3090 cal BC



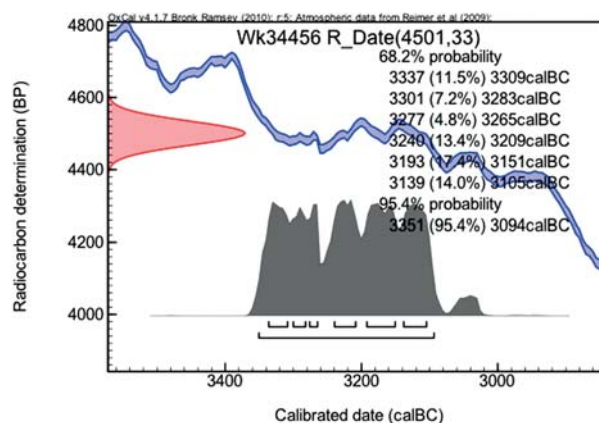
Wk-34456 4501 ± 33 BP (AMS measurement)

Sample: Chobareti 6, collected 26 August 2009, submitted in July 2012 by A. Sagona

Context: Pit 15, 25–30 cm above the base, and 1.0 cm below the surface in Trench 6.

Material: charcoal

Calculated date: 68.2% probability 3193–3105 cal BC
95.4% probability 3351–3094 cal BC



Wk-34457 4451 ± 34 BP (AMS measurement)

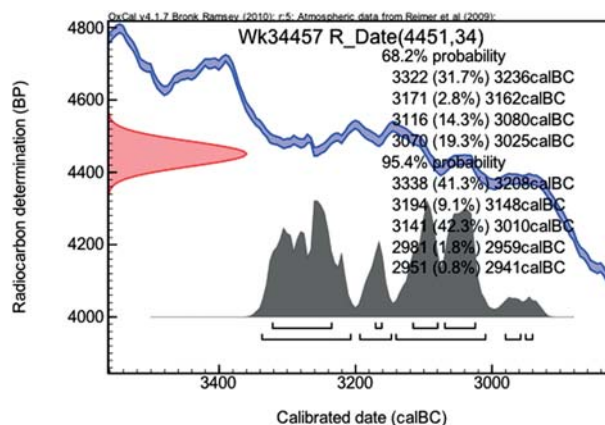
Sample: Chobareti 7, collected 21 June 2012, submitted in July 2012 by A. Sagona

Context: Square F42.1, Locus 103, Basket 28, S. 29

Material: Charred grain

Calculated date: 68.2% probability 3322–3236 cal BC

95.4% probability 3338–3208 cal BC



Wk-34458 4451 ± 34 BP (AMS measurement)

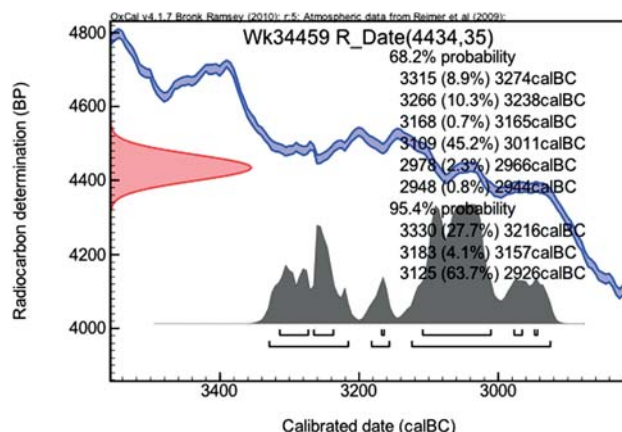
Sample: Chobareti 8, collected 22 June 2012, submitted in July 2012 by A. Sagona

Context: Square F42.1/F42.4, Locus 103, Basket 29, S. 50

Material: Charred grain

Calculated date: 68.2% probability 3118–3024 cal BC

95.4% probability 3195–3007 cal BC



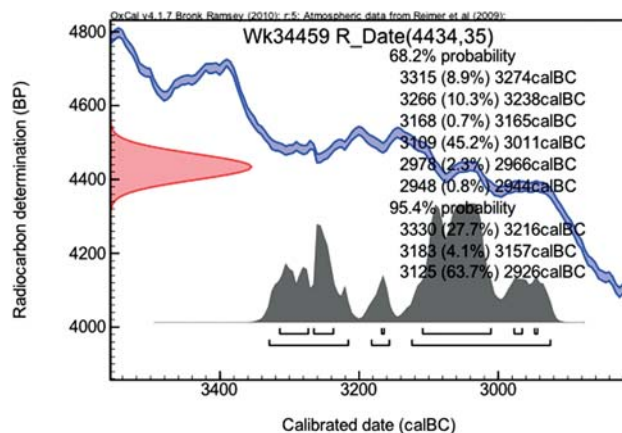
Wk-34459 4434 ± 35 BP (AMS measurement)

Sample: Chobareti 9, collected 22 June 2012, submitted in July 2012 by A. Sagona

Context: Square F 42.4, Locus 103, Basket 29, S. 45

Material: Charred grain

Calculated date: 68.2% probability 3109–3011 cal BC
95.4% probability 3125–2926 cal BC



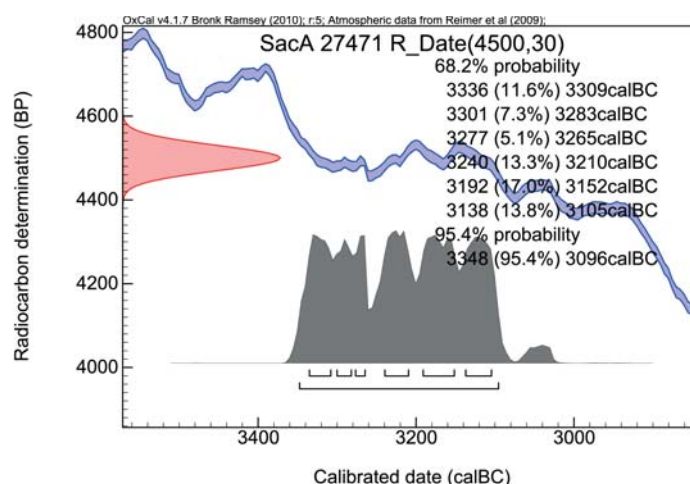
SacA-27471 4500 ± 30 BP (AMS measurement)

Sample: Chobareti 10, collected [25 August 2011], submitted by E. Messenger

Context: Pit 16

Material: Charcoal

Calculated date: 68.2% probability 3192–3152 cal BC
95.4% probability 3348–3096 cal BC



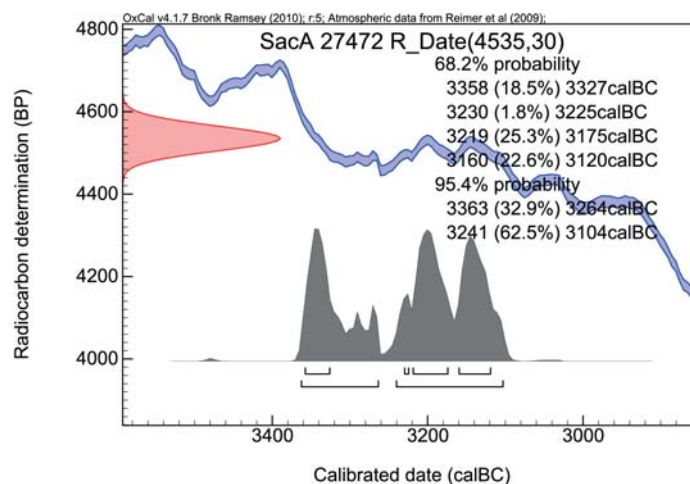
SacA-27472 4535 ± 30 BP (AMS measurement)

Sample: Chobareti II, collected 26 August 2011, submitted by E. Messenger

Context: Pit 17

Material: Charcoal

Calculated date: 68.2% probability 3219–3175 cal BC
95.4% probability 3241–3104 cal BC



ARTEFACT ANALYSIS

(Claudia Sagona, Antonio Sagona, and Kakha Kakhiani)

Broadly speaking, the distribution of ceramics conforms to a clear pattern. Those collected from the structures, graves and pits in the saddle (Lower Operation) belong mainly to the Kura-Araxes

and contemporary horizons, whereas ware types from the Upper Operation are overwhelming of late Antique and Medieval date at this stage. Out of context sherds found in the clearing activities of Square B48, points to an earlier Iron Age settlement. Ware types currently represented by a single sherd and pottery sherds found only in the fields below site, collected during a brief pilot survey conducted by Jessie Birkett-Rees in 2012, have not been included in this report. The following brief commentary is followed by a more detailed data on the ware types and forms.

Discussion

There are several noteworthy features of the pottery repertoire from the Lower Operation. First, is the range of pottery found in association with Kura-Araxes, in Structure 4. There are three other ware types in addition to Kura-Araxes: Chaff-Faced Ware, Hard Orange Drab, and Yellow-on-Red. Second, is the preponderance of pale brown Kura-Araxes pottery, as opposed to vessels with a red and black colour scheme. Third, the clear evidence we have on the technology of ceramic manufacture.

The bulk of Chobareti Kura-Araxes ceramic containers have fine-grained clay that is hard-fired to shades of pale brown. Sherds are sharp-edged, though its cross-section often laminates vertically, clearly revealing their mode of manufacture (Fig. 52). Some vessels are built up with coils, which leave undulating surfaces that are moderately polished on smaller containers and left matt on large jars. Other vessels are built using slabs of clay that were applied to a sand-filled cloth bag, whose textile impressions are preserved at the centre of the core (Fig. 52: 6). Forms include large tall-necked jars, with an everted, rail-like rim, and small, round-bodied pots, with tall flaring necks, ending in a thin and simple rounded lip, and strap handles spanning from rim to shoulder. Unusual for this ware type is a hole-mouthed jar with a rounded thickened rim. Surface treatments can have a 'leathery' look. Most vessels are undecorated, but some sherds bear broad, flattened knobs, about 3.8–4 cm in diameter, occasionally with deep dimples in the centre. Many of the elements of this category of Kura-Araxes — its pale brown colours, sandy paste, and the popularity of tall necks — are generally attributed to the earliest phase (ca. 3500 BC), but our suite of radiocarbon dates clearly show that they continued until 3000 cal BC. The second category of Kura-Araxes is more refined. Its clay is compact and fine, well levigated, and fired hard, enabling the construction of thin-walled containers. Tellingly, this group can be decorated with linear patterns incised after firing, a trait it shares with examples from Sos Höyük and other sites.⁶⁴

Hard Orange Drab Ware is the fabric term we have assigned to a handful of late Sioni pottery fragments. This is a provisional attribution because most pieces do not bear the revealing traits such as the decorated rims. The predominant type at Chobareti is the deep hole-mouth jar with plain rim, and walls that break sharply with a jagged edge; perforated vessels are also represented. Its fabric is moderately well levigated with fine gritty inclusions. A pale grey core points to an incomplete oxidisation process. Named after the type-site in Georgia by Medea Menabde and Tamaz Kiguradze, this ware type is at home in the southern Caucasus but rare in Anatolia, where its westernmost limit is the north-eastern highlands.⁶⁵ The chronology of the Sioni horizon remains very loose, a situation caused by too few differentiated and secure sequences, and a shortage of

⁶⁴ Sagona and Sagona 2000: fig. 8: 4.

⁶⁵ Menabde and Kiguradze 1981; Kiguradze and Sagona 2003; Marro 2008; for an overview of the south Caucasian Chalcolithic, see Chataigner 1995.

radiocarbon dates. Even so, that Sioni ceramics have been found in association with early Kura-Araxes and Chaff-Faced Ware make it reasonable to place the tail end of the Sioni horizon in the second half of the 4th millennium BC.⁶⁶

Chaff-Faced Ware is most often associated with north Mesopotamia, simply termed ‘Amuq F’, ever since the Braidwoods used it to characterise the Late Chalcolithic sequence in the Amuq Plain.⁶⁷ The few fragments from Chobareti display some of the hallmarks of this ware type, though they are not a slavish imitation of the Mesopotamian variety. Both surfaces bear clear impressions left once the chaff temper was burned in the firing process. Smoothing is a trait, though most pieces are plain. The fabric is consistently pale brown in colour, indicating little attempt at experimentation with firing. Interestingly, the vessels are handmade, and their forms so far are restricted — holemouth jars, straight-sided bowls and scoops. All this suggests a certain degree of hybridity in the potting tradition, which bear more important social and cultural implications.

The relationship between Kura-Araxes ware, Late Sioni and Chaff-Faced Ware has been a topic of lively debate in recent years.⁶⁸ Whereas once the southern Caucasus and eastern Anatolia in the late 4th millennium BC were viewed as conforming predominantly to the Kura-Araxes horizon, it has become increasingly obvious that the scene in the highlands was much more complex. The relationship between these various cultural horizons in the earliest phase of the Kura-Araxes and the question of chronology has been thrown into sharp relief recently with investigations at the remarkable site of Areni-1 Cave, where according to the excavators radiocarbon readings “...extend the date for the first appearance of KA-type artifact assemblages to 4100–3800 CAL B.C., several hundred years before the previously accepted earliest date. Areni-1 can therefore be placed in the putative hiatus between the Late Chalcolithic Sioni and the fully developed KA culture.”⁶⁹ The emerging picture, then, displays a culturally interactive region, where hybridity of material culture was more common than we suspected. Even the conventional view that Chaff-Faced Ware is derived solely from northern Mesopotamian has been questioned.⁷⁰ Catherine Marro has aptly described this situation as follows:

My present interpretation is that the Highlands were subject to a complex territorial organisation involving Transcaucasian and Mesopotamian human groups, whose activities in the area could be either permanent or seasonal: their ecological setting would be chosen accordingly.⁷¹

Ceramics from the Upper Operation belong to the broadly consistent ware category termed Crisp Brick. The fabric is moderately hard and well levigated with fine mixed gritty particles. It is evenly fired to a range of colours ranging from reddish yellow through browns to pale reds. Except for the large storage containers, vessels were thrown on a wheel, resulting in the characteristic striations and relatively thin walls. Sub-categories of this ware group have been distinguished:

⁶⁶ Marro 2008.

⁶⁷ Braidwood and Braidwood 1960: 229.

⁶⁸ Kiguradze and Sagona 2003; Marro 2008; Palumbi 2008.

⁶⁹ Wilkinson *et al.* 2012. In relation to this is the question of the origins and spread of the red and black colour scheme that characterises standard Kura-Araxes. Giulio Palumbi (2003, 2008) has presented a strong argument in favour of an Anatolian homeland, but recent evidence from Ovçular Tepe (Marro *et al.* 2011), like that from Areni-1, Cave, causes us to think again.

⁷⁰ Marro 2010.

⁷¹ Marro 2007, p. 92.

those whose paste is flecked with golden mica, vessels that show signs of pattern burnishing on the exterior surface, and containers that have been slipped in red. Vessels which are not burnished (or have a perfunctory polish) or slipped, are generally decorated with bands, finger-impressed or plain, placed near the shoulder; bands with deeply impressed 'horseshoe' motifs have also been found. Wiped surfaces, wavy combed designs, and finger-impressed pie-crust rims are also part of the ornamental repertoire. Although this pottery type has an extensive distribution both in the southern Caucasus and neighbouring eastern Anatolia, we do not have any radiocarbon readings from the Upper Operation. Attributing Crisp Brickly ware a precise timeframe is not possible as yet; the best we can do is to assign it to the broad stretch of late Antique and Medieval.

Methodology of Ceramic Categorisation

In the presentation of the ware types that follows, data are grouped under the following headings:

Context — Excavation loci at Chobareti.

Manufacture — Refers to the methods of construction such as HM (hand-made), WM (wheel-made), coil built, slab construction, or mould-made.

Fabric and Texture — Notes the qualities of the clay such as its soapy feel, refined, fine, medium or coarse texture, or general observations on its appearance.

Inclusions — Refers to the nature of the grits, chaff or other additives mixed into the clay matrix by the potter (as observed at a macroscopic level).

Firing — Notes variations in colour through the core of the vessel, burnt or under-fired wares that resulted from variations of kiln temperatures and stacking practices used to load the kiln.

Hardness — A general description of the fired clay will be given usually in the range of soft, friable, crisp, hard, clinker, stone-ware.

Nature of Breaks — Jagged, sharp, dull, eroded edges, undulations from coil manufacture can be observed on the broken edges of the pottery fragments.

Colour Range — Core and surface colours have been assigned a colour code and most often the given colour name after the Munsell *Soil Colour Charts*, according to standard archaeological practice.

Surface Treatment — Various forms of finishing vessel surfaces may include slipped surfaces, burnishing, smoothing, straw-wiping, surfaces that are simply left plain, or true vitreous glazes.

Decoration — The mode of ornamentation and nature of the designs.

Principle Shapes — Depending on the forms, the classification categorises vessels from the closed shapes (amphorae/storage jars/pithoi, urns/pots, jars (wide neck), bottles, jugs, juglets, flasks, spouted flasks, beakers/mugs; other types), through open shapes (bowls, cups with handles/open pots with handles) to other pottery forms (lids, incense pots/braziers/stands, cooking pots/pans/trays, pot stands, scoops, lamps, closed lamps, moulds).

Ceramic Ware Types

A description of individual ceramic finds illustrated in the figures is provided in the Catalogue.

Kura-Araxes (Medium Grey Brown)

Context — Certainly in good quantities in the excavations of 2009, predominantly found in areas F42/G42, G46, L47.4, N49.1 in the subsequent investigation.

Manufacture — Hand-made. Vessels are built using one of two modes of production. First, the coil technique, which is clearly evident in the laminated cross-sections — elongated voids at the coil seams, dips and curves of the sections and sometimes in the undulations of the vessel wall. Second, vessels can also be manufactured with slabs of clay. This entails constructing a container over a mould formed by a sand-filled cloth bag, whose impressions are visible when the pottery fractures along the seam lines of successive layers applied on the front and/or back of the cloth (SPF G42.2/F42.1/2–/3, **Fig. 52: 6**). Slab construction is evident the cross-section (**Fig. 52: 2** SPF G42.2/F42.1/4). Its laminations and voids tend to run vertically, whereas in coil construction the laminations are generally horizontal to oblique (**Fig. 52: 1–2, 4–5**).

Fabric and Texture — Friable and fine-grained, evenly levigated clay. The vessels tend to be reasonably uniform in appearance when compared to pottery recovered at sites in eastern Anatolia especially in the Pasinler and Bayburt Plains.

Inclusions — Sand is the most common additive to this ware.

Firing — Usually grey to pale grey at the inner core, firing to a pale brown from well into the core to the surfaces.

Hardness — Generally, hard-fired, though some examples are friable

Nature of Breaks — Sharp breaks; some less well-fired examples can be friable.

Colour Range — Mid-grey c.10YR 4/1, or paler hues, grey 7.5YR 6/4–7/4 through to brown 5YR 5/6, 7.5YR 6/6 or buff.

Surface Treatment — Most small- to medium-sized containers have a compact light to medium burnish on the exterior. Some have very well-produced slipped and burnished surfaces in pale brown hues, resulting in a leather-like appearance. Large vessels appear to be matt. The colour range varies, leaning toward a pale brown (c. 10YR 7/4) and tan slipped exterior surfaces that can have a leathery appearance. The well-known and black-and-red colour scheme of ‘typical’ Kura-Araxes pottery is less common at the site.⁷²

Decoration — The only attempts at decoration are applied flattened knobs, about 3.8–4 cm in diameter (SPF103/37, **Fig. 42: 6**) and the same types of knobs with deep dimples in the centre (SPF103/38, **Fig. 42: 8**); they appear more decorative than functional. A few examples of flattened knob-like projections at the rim of pots have also been noted (SPF G42.2/F42.1/1, **Fig. 42: 8**). Possible fugitive traces of graffiti scratched into the exterior surface of one fragment from the shoulder of a tall-necked jar with flaring rim (**Figs 35: 3; 54: 2**).

Principle Shapes — Large tall-necked jars, with an everted, rail-like rim; a variation includes an everted rim flattened on the lip. Very large and thick handles with a rounded section probably belonged to a large pithoi. Smaller pots comprise another category. They can have tall flaring

⁷² Cf. Sagona and Sagona 2004, Ware 3.1.

necks ending in a thin and simple rounded lip, and strap handles spanning from rim to shoulder. The juncture of neck and shoulder is well defined, and may represent an offset. A few shapes have rounded bodies and tall necks that slope into the rim (SPF 103/2, **Fig. 42: 2**). One example of a fenestrated stand with a flat, disc-base was recovered (**Fig. 43: 3**). Bases are generally flat.

Kura-Araxes (Refined)

Context — the number of refined examples is limited at Chobareti, but a few fragments have been identified in L42.1, L47.4

Manufacture — Hand built and very thin-walled.

Fabric and Texture — Well-levigated, compact paste.

Inclusions — Refined biscuit with occasional small gritty particles in the paste.

Firing — Even through out the biscuit.

Hardness — Hard-fired

Nature of Breaks — Sharp and angular; SPF 201/2 (**Fig. 45: 10**) is a flat base fragment, abraded from use.

Colour Range — Clay is mid-brown (2.5YR 4/2) through to reddish yellow (5YR 7/6).

Surface Treatment — Interior is smoothed, but not burnished while the exterior has a moderately burnished surface.

Decoration — Fine linear, scratched decoration made post-firing is near the resting surface of the base.

Principle Shapes — representative diagnostics are limited to flat base and a thin vertical, pierced lug, both from small closed vessels.

Drab Brown

Context — Not found in great numbers, this ware may represent a domestic cooking ware with a short lifespan, such is the nature of its manufacture. Most fragments have come from the Lower Operation, F42.1/F42.4; G42.2; L47.4.

Manufacture — Hand made, mostly thin-walled, probably built with slabs of clay. The fragments found suggest that the vessels made of this ware were hastily produced when the occasion demanded, with very little care taken in their appearance or durability.

Fabric and Texture — Moderate to poor levigation.

Inclusions — A medium amount of small to large mixed gritty inclusions in the paste (SPF201/1, **Fig. 46: 1**); some voids; golden micaceous inclusions are also represented in some fragments (SPF201/6).

Firing — poorly fired, darker at core firing browner near the surfaces.

Hardness — Fragments vary from moderately hard to quite brittle, friable and eroding.

Nature of Breaks — Quite jagged and sharp.

Colour Range — Pale yellowish-red (5YR 5/6) at the core, firing darker and browner (5YR 3/2) near the surfaces. Other fragments can be dark brown-black at the core (10YR 2/1) firing paler yellowish brown (10YR 6/2–5/2) near the surfaces

Surface Treatment — One example of a base has irregular short straw impressions (SPF 201/1, Fig. 46: 1) and an interior with gouged lines, possibly post-depositional damage; surfaces are matt and drab.

Decoration — none preserved.

Principle Shapes — SPF 200/1 appears to be a flattened and thin floor fragment from an open vessel, perhaps a cooking pan. The simple rounded lip of a moderately narrow-necked jar is equally poor in quality (SPF201/6, Fig. 46: 2); this example is relatively thicker in the wall.

Chaff-Faced Ware (Pale Brown Chaff)

Context — This ware category has some elements — chaff impressions, drab colouring, use of chaff and relatively thin walls — that are suggestive of earlier Chalcolithic wares. To date found in squares F42.1/F42.2; F42/G42.

Manufacture — Hand manufacture using coil technique has left distinctive undulations in the surface of some fragments (e.g. SPF 103/4, Fig. 44: 2). The use of chaff and few grits has resulted in a light-weight fabric.

Fabric and Texture — The clay is well-levigated, having a medium-fine appearance.

Inclusions — Chaff is visible in the paste as voids and/or impressions on the surfaces. The occasional fine gritty particles, especially black, are added sparingly.

Firing — Hard and well-fired, the ware shows no attempt with firing experimentation, and accordingly its colour range is limited.

Hardness — Quite crisp with a hollow ring when handled.

Nature of Breaks — Moderately sharp and medium-fine angles at the edges.

Colour Range — Mostly, an even-coloured, reddish yellow (7.5YR 6/6) through the section; others tend towards pinker hues (7.5YR7/4).

Surface Treatment — Surfaces are either matt or smoothed in the pink (7.5YR 8/4) to reddish yellow (7.5YR 6/4) range. Impressions of chaff are visible the on walls and bases. Smoke-blackening is present, possibly from domestic use. Clear scratches left from straw wiping in rough attempts to smooth the surface are evident on some fragments (e.g. SPF 103/16, Fig. 44: 1; SPF 103/33, Fig. 44: 4)

Decoration — No decoration has so far been observed, although the chaff impressions and wiping may have been a rustic finish desired by the potters.

Principle Shapes — Hole-mouth jars with relatively thin-walls and simple rounded lip measuring c.24 cm in diameter are represented (SPF103/4, SPF103/16). One open bowl with straight walls slopping in toward the resting surface has been documented (SPF103/5, Fig. 44: 3). Bases are flat with a simple profile (SPF 103/6, Fig. 44: 5). A tray fragment with scooped front was roughly smoothed around the opening rested on a flat base.

Hard Orange Drab

Context — Only a few examples have been identified to date and these occur in Square F42.1/F42.4.

Manufacture — Built by hand with the coils, resulted in obvious, elongated and compressed voids along seam lines.

Fabric and Texture — Medium-textured and moderately levigated clay was used in vessel manufacture.

Inclusions — A moderate amount of fine gritty inclusions; the white gritty particles stand out against the dark grey matrix. Chaff voids are evident in the clay.

Firing — The biscuit can be inadequately fired, showing a marked difference between the dark grey core and the margin of reddish yellow around the edges and surfaces.

Hardness — The fabric is hard-fired.

Nature of Breaks — Sharp and jagged, tending towards less severe edges on some examples.

Colour Range — Pale grey (N5/) or dark grey (N4/) core firing reddish yellow (5YR 7/6 and 7/8).

Surface Treatment — Drab and non-burnished surfaces are the norm. Vessels can be smoothed on both surfaces, short of burnishing (SPF 103/7, Fig. 44: 8), whereas others have a crazed, perhaps heat damaged quality with fine cracks and pits in the surface (SPF 103/8, Fig. 44: 9).

Decoration — None has been recorded to date.

Principle Shapes — Shapes are limited at this stage, but some flat bases are represented (*e.g.* SPF 103/7–103/8) that are smoothed and simple in profile.

Yellow on Red (Yellow Slipped)

Context — A rare ware, known examples found at Chobareti are from trench F42.1/F42.4.

Manufacture — Hand-made, coil technique is likely, though none of the small fragments so far have yielded evidence of method of manufacture at the macroscopic level.

Fabric and Texture — Poorly levigated and medium-textured, the clay has a rough and fine sandpaper texture to the touch.

Inclusions — Occasional fine gritty inclusions are present; more prevalent are chaff voids, which are moderately dispersed through the matrix.

Firing — Degrees of firing vary. Even reddish-yellow (7.5YR 6/6) through the cross-section indicative of thorough firing is recorded (*e.g.* SPF 103/17, Fig. 44: 7) while other fragments are grey at core (5YR 4/1), but redder (5YR 6/8) near the surfaces (*e.g.* 103/18, Fig. 44: 6).

Hardness — Friable clay that is light weight.

Nature of Breaks — Eroding, dull and friable at the edges.

Colour Range — Tends towards the reddish yellow (5YR 6/4) in cross-section, whereas its core can be a pale grey (5YR 6/1–5/1).

Surface Treatment — The interior can be slipped and smoothed in pale grey, with a few examples of pink. Surfaces on the exterior have a distinct pale greenish yellow (5Y 8/2), or yellow (2.5Y 8/4) slip, appearing in a marked colour contrast with the fabric.

Decoration — None has been found to date.

Principle Shapes — Thick-walled body sherds [*ca.* 2–1.7 cm] indicate the manufacture of large containers. Compared to Chaffed-Faced Ware, the walls of these vessels are noticeably thicker, more in line with black-and-red Kura-Araxes wares. No diagnostic fragments have been recovered as yet.

LATE BRONZE AGE (?)

Hard Red (Yellow Slip)

Context — This ware was found immediately below the surface deposits of L47.4; L47.6; N49.1.

Manufacture — Hand-made, most likely built with coils.

Fabric and Texture — Medium-coarse paste with sandy appearance though well-levigated.

Inclusions — A moderate amount of mixed fine to large gritty particles is in the clay.

Firing — Inconsistent firing is indicated by the varying colour range through the section; redder near the interior of the biscuit, whereas the outer edges tend towards grey.

Hardness — Very hard, stone-like fabric (*e.g.* SPF 200/6, Fig. 46: 3).

Nature of Breaks — Sharp and moderately jagged edges.

Colour Range — Red (2.5YR 6/4) to reddish yellow (5YR 6/6) core and grey (5YR 4/2) in the core.

Surface Treatment — Both surfaces are coated with a thick matt, yellow (2.5Y 8/3; 5Y 8/4) slip that has a tendency to craze. On another body fragment (200/9, Fig. 46: 3) the overlay of red slip was thicker, but similarly eroded.

Decoration — The interior was washed in a maroon (7.5R 5/1), fugitive slip, which was been carried over the exterior (*ca.* 2 cm down the wall). The end result is a thin, ill-defined band of dark maroon-red around the rim. The outer lip of one jar fragment has regularly spaced notches decorating the outer lip (SPF 200/6)

Principle Shapes — A large closed hole-mouth jar with flattened cut rim (SPF 200/6) that slopes oblique out has been identified.

Yellow on Black (Painted)

Context — Found in the surface material of N49.1.

Manufacture — Likely to have been hand built, but hard to determine owing to smoothing and slip; undulations in section might indicate coil technique.

Fabric and Texture — Fine to medium texture; compact and well-levigated.

Inclusions — Fine mixed gritty inclusions.

Firing — Even grey colour throughout section.

Hardness — Hard, compact fabric.

Nature of Breaks — Moderately fine, eroded and rounded breaks.

Colour Range — Dark grey (10YR 4/1) through core.

Surface Treatment — The exterior has a yellowish (2.5Y8/2) slip, whereas the interior is slipped in a very pale brown (10YR 7/3).

Decoration — Fine thin lines are executed in a dark brown (2.5Y 3/1) paint on the exterior.

Principle Shapes — A single body sherd has been identified at present.

IRON AGE

Brown Black (Grey Slipped)

Context — Upper Operation, surface find in disturbed contexts, during cleaning of the citadel wall in B48.

Manufacture — Fine striation lines on the interior are suggestive of wheel manufacture; other areas are obscured by burnishing; moderately well-levigated.

Fabric and Texture — SPF B48/2 (Fig. 48: 11) is medium textured though compact, hard fabric.

Inclusions — Mixed gritty inclusions are angular and they from very fine to large; some breaking at the surface. This fabric is likely to correspond to Ware 6:2:5, 'Grey-Slipped Brown-Black Ware' attested at six Iron Age sites in the Bayburt province.⁷³

Firing — Evenly fired reddish-grey through section.

Hardness — Very hard fabric

Nature of Breaks — Sharp breaks, medium to coarse in appearance, relative to gritty inclusions.

Colour Range — Core is reddish-grey (5YR 5/2) throughout.

Surface Treatment — The rim is lightly burnished; streaky burnished on the exterior lower wall, but the groove under the rim on SPF B48/2 is matt.

Decoration — Horizontal ridges and wide, shallow grooves decorate under the rim exterior and on the shoulder.

Principle Shapes — The single sherd belongs to a closed jar, hole mouth in appearance with thickened lip.

⁷³ Sagona and Sagona 2004, pp. 201–202.

LATE ANTIQUE/MEDIEVAL

Crisp Bricky (Sub-Category: Micaceous)

Context — Predominantly found in the Upper Operation (B48; D50.3; D50.4), but occasional examples were found in the Lower area of Chobareti (G42.2/F42.1; L47.4; N49.1), as part of wash deposit from the upper slopes. Generally, this category equates with Ware 8:1 ‘Crisp Bricky Orange’ from north-eastern Turkey and specifically with Ware 8.1.5, a micaceous type found at seventeen sites.⁷⁴ An approximate date for the Anatolian examples is eleventh to fifteenth centuries.

Manufacture — Wheel-made with relatively thin walls. Throwing ridges and wheel striated interiors, sometimes smoothed (SPF 401/9, **Fig. 47: 4**). Larger vessels appear to be at least partially hand built with distinct coil ridges visible in the profile, suggesting the construction of the vessel in parts.

Fabric and Texture — Fine to medium-coarse textured paste, well-levigated.

Inclusions — Can be moderately flecked with very fine to fine golden micaceous particles. Fine, evenly distributed, mixed gritty particles are also in the paste (e.g. SPF 100/3, **Fig. 44: 10**; SPF 401/8); sometimes black crystalline particles are visible to the eye (e.g. SPF 401/9).

Firing — The paste is generally well-fired and generally even coloured through section.

Hardness — Medium hard fabric.

Nature of Breaks — Edges are moderately sharp, showing signs of some erosion.

Colour Range — Exterior surfaces range around reddish yellow (7.5YR 6/6). Clays vary slightly in hues between browns (2.5YR 5/8; 5YR 5/6–6/4) to reddish brown and pale red (5YR 6/6). The less well-fired examples remain grey at the core (7.5YR 5/1–5/3).

Surface Treatment — Drab surfaces are usual; occasional fragments have a perfunctory burnish. A slurry finish or thin wash has also been recorded (SPF 100/3, SPF 401/7, **Fig. 47: 3**). Others fragments have red-slipped surfaces. One jar base has vertically shaved patches around the bottom of the wall in an attempt to neaten and thin the wall down (SPF 401/19, **Fig. 48: 4**).

Decoration — Elaborate combinations of decorative features and treatments that have a rustic quality characterise this ware. Large jars have multiple applied bands with finger impressions at regular intervals, mimicking rope designs, high on the vessel wall (SPF 401/8, **Fig. 47: 1**; 401/12, **Fig. 46: 11**). This is occasionally coupled with plain bands (perhaps representing metal bands; SPF 401/9–10, **Fig. 47: 2, 4**). Its lower wall has an all-over design, wiped in a haphazard fashion probably with straw resulting in patches of straight lines angling in various directions (SPF 401/7–9, **Fig. 47: 1, 3, 4**). The thinner finer vessels that have been found on survey, possibly from jugs (SPF 401/12, **Fig. 46: 11**) and bowls can have elaborate combed wavy and straight lines on the exterior. A number of fragments from a smaller vessel have an applied band with sharp and deeply impressed repeated ‘horseshoe’ motifs (SPC 401/21, **Fig. 47: 7**). Jar rims can have finger-impressed pie-crust edges (SPF 401/15, **Fig. 46: 7**).

⁷⁴ Sagona and Sagona 2004, pp. 221–223.

Principle Shapes — Large pithoi fragments have been found in quantities (SPF 401/7–10). Elaborately grooved and ridge handles with finger-impressed dimples probably came from large jars in the repertoire and were applied vertically to the wall of the vessel (SPF 401/13, Fig. 47: 6; 401/20, Fig. 47: 5). Tall-necked jugs can have seams where offset neck and body are joined. One example of this ware (too poorly preserved to illustrate) does have signs of deeply combed horizontal grooves around the vessel wall. Rims can be thickened and decorated with ridges and grooves (SPF 401/26). Bases can be vertically cut to neaten the edges (SPF 401/16, Fig. 48: 3). In one instance, an extremely thick and friable base was found from a very large pithos (D50.3, 401). Resting surfaces — not always completely flat — can be slightly undulating or concave. A small bowl fragment has thickened lip (SPF 100/3, Fig. 44: 10). One high ring base fragment possibly came from an open bowl (SPF 401/24, Fig. 47: 8). A complete profile of a small, footed cup or lid with was preserved in one fragment (SPF 500/11, Fig. 49: 5).

Crisp Brickly (Sub-Category: Burnished)

Context — Upper sector in B48; D50.3.

Manufacture — Depending on the size of vessels, manufacturing techniques vary. The smaller pots are clearly wheel-made (SPF 500/4, Fig. 49: 15; SPF 500/14, Fig. 49: 12); coil technique was adopted for larger storage jars (SPF 500/3). Finely, wheel-rilled, interior walls has been observed (SPF 500/4).

Fabric and Texture — Medium-textured clays are used to build larger vessels and fine, well-levigated fabrics were used for smaller, thin walled pots.

Inclusions — Voids and generally very fine to small mixed gritty particles are in the matrix; mica can also be present.

Firing — Clays were hard-fired, like the other categories of Crisp Brickly ware sections tend to be evenly coloured through the wall of the vessel, sometimes lighter (red to brown) near the surfaces.

Hardness — Compact and hard-fired fabric.

Nature of Breaks — Breaks are sharp.

Colour Range — Grey (7.5YR 5/1; 10YR 3/1) to pale grey-brown (5YR 5/2) at the core, sometimes firing brown (7.5YR 6/4) to reddish yellow (5YR 6/6) toward the surfaces.

Surface Treatment — Some vessels (SPF 502/2, Fig. 49: 14) have a pale grey (5YR 6/1) to yellow (10YR 7/2) slip or smoothed self-surfaces that have been burnished to varying degrees.

Decoration — Pattern burnishing has been documented (SPF 500/4; 502/2) as well as combed decoration (SPF 502/2), but on the whole the decorative techniques known on other categories of Crisp Brickly wares are so far absent.

Principle Shapes — Body fragments (SPF 500/3, Fig. 49: 13; SPF 500/4, Fig. 49: 15; SPF 502/2, Fig. 49: 14) and the flaring rim (SPF 500/14, Fig. 49: 12) from large jars are present.

Crisp Brickly — (Sub-category: Red-Slipped)

Context — This red-slipped category has so far been identified in sectors B48 and D50.3.

Manufacture — Wheel-manufacture is apparent although some examples were possibly thrown on a slow wheel or even modelled by hand (e.g. SPF 401/5, Fig. 48: 6).

Fabric and Texture — Clays are medium to course in texture and compact; some poorly levigated fragments have been identified (SPF 401/18, **Fig. 48: 8**).

Inclusions — Very fine to small mixed gritty particles and mica are in the fabric.

Firing — Firing varies from even to sandwiched colours through the section.

Hardness — Hard-fired clays.

Nature of Breaks — Edges of fragments tend to be sharp and angular.

Colour Range — The core of the vessel walls can be dark grey (N3/; 5YR 5/4) throughout, some firing browner (7.5YR 5/3; 5YR 5/6) near the surfaces.

Surface Treatment — Surfaces are generally well-prepared and smoothed with thin, patchy red (10R 4/4, 4/8, 5/6; 2.5YR 6/6) wash or paint over the exterior applied in haphazard, rustic fashion. This is usually left matt, but use wear sheen can be present (SPF 401/5, **Fig. 48: 6**).

Decoration — The tendency to embellish the surfaces with horizontal grooves (SPF 401/4, **Fig. 48: 5**), incised curved lines (SPF 401/5) and impressed dimples (SPF 401/28, **Fig. 48: 7**) seen in the other categories of Crisp Bricky ware are also documented in red-slipped examples.

Principle Shapes — The range of shapes with Crisp Bricky fabric having a red slip tend to be cooking and possibly table wares. One closed pot (SPF 401/4) has signs of heat damage from use in the fire. Other forms include jars with flaring rims and simple rounded lips (SPF 501/4, **Fig. 50: 2**), flaring rimmed open bowls (SPF 501/3, **Fig. 50: 3**) and larger closed vessels, possibly jugs and pitcher fragments (SPF 402/5). Like the previous micaceous category, handles are modelled by hand and deeply grooved and ridged (SPF 401/28, **Fig. 48: 7**).

Eroding Light Red

Context — Upper sector in B48; D50.3; Lower operation in F42.1; L47.4.

Manufacture — Wheel-made likely and thin-walled.

Fabric and Texture — Light weight and friable clay with fine sandy texture.

Inclusions — Mostly white particles in the paste, with the occasional very fine micaceous inclusion.

Firing — Even colour through section, thoroughly fired.

Hardness — This fabric is soft and it can be scratched with the finger nail.

Nature of Breaks — Fabric tends to erode to dull edges and surfaces.

Colour Range — Bright reddish yellow (5YR 7/6) in the section, changing to a stronger, darker pale red (2.5YR 6/6) on the surfaces.

Surface Treatment — Surfaces are matt and dull.

Decoration — No decoration has been recorded so far.

Principle Shapes — The thin walls and curvature of the fragments, suggest small and closed vessels such as juglets and cups, but no diagnostics have yet been found.

MODERN

Heavy Dark

Context — Chobareti Upper, B48; D50.3

Manufacture — An overall rustic appearance suggestive of hand-made manufacture, using possibly coil and slab techniques. This ware probably equates with the modern Heavy Dark ware produced in villages in eastern Turkey.⁷⁵ Its main period of production appears to be the nineteenth and early twenty centuries, though it may still be produced in a handful of villages.

Fabric and Texture — There are medium-coarse, heavy clay, compact and moderately well-levigated. Other fragments are compact and heavy with a ‘stone’ ware quality (SPF 401/29, Fig. 48: 9).

Inclusions — The matrix can have a medium amount of mixed small gritty inclusions and minute particles of mica. No chaff is apparent in the paste.

Firing — Mid- to dark-brown through section, the walls can remain darker near the surfaces (SPF 502/3, Fig. 50: 1).

Hardness — A hard, almost stone-like fabric.

Nature of Breaks — Moderately jagged sections and sharp edges.

Colour Range — The clay matrix varies considerably, ranging from brown (7.5YR 3/1–5/3) to dark brown (10YR 3/1).

Surface Treatment — Shades of pale brown (10YR 6/2–5/3), brown (7.5YR 6/4) and greys (5Y 3/1) are typical of the surface colours; smoke blackening, streaky burnishing on the interior (SPF 500/7) and/or exterior are represented; when not burnished surfaces can be smoothed and drab. A pale thin and drab yellowish grey (5Y 7/1) slip, with a tendency to crazed coats on the interior (SPF 502/3, Fig. 50: 1). The surfaces can be irregular, slightly undulating and crazed (SPF 502/3) with fine cracks.

Decoration — No decoration has been recorded, however, the vertical streaky burnishing on one example (SPF 502/3) was probably an intentional effect ranging in hue from plain greenish yellow (5Y 7/2) to darker grey (2.5Y4/1) where the surface was compressed.

Principle Shapes — A baggy deep pot fragment probably came from a jar with vertical rim and rounded, simple lip (SPF 500/7, Fig. 50: 5).

Stone industry and other Artefacts

Mention should be made of the stone artefacts from Chobareti. Two traits stand out. First is the number of basalt, saddle-shaped, grinding stones, a good number found scattered on the surface in the Lower Operation prior to excavations in 2009 (Figs 34; 57: 1–3). This and the richness of cereal remains, reflect to the importance of agriculture in the subsistence economy at Chobareti during

⁷⁵ Sagona and Sagona 2004, p. 228, Ware 8.11.

the late fourth millennium BC. Although a single find at present a red flint sickle blade (Fig. 56: 5) is in line with this view. Stone pestles are also part of the inventory, with the best examples are from the Upper Operation (Figs 50: 20; 57: 5). Second, is the relative paucity of worked stone tools (Fig. 50: 6–13). Following on from this is the third point, namely the small quantity of obsidian flakes, including a well fashioned projectile point, despite the relative proximity of the Chikiani source (Figs 50: 7, 9, 10, 12–13; 54: 3; 56: 2–4). This may indicate some barrier, cultural or territorial, between the Aspidza region and the Chikiani source. The use of riverine pebbles (Fig. 56: 3) rather than nodules of obsidian from the source itself supports this view. Moreover, it is interesting that, despite the predominance of obsidian at most Kura-Araxes sites, both obsidian and red flint were worked at Chobareti. Three examples of modified pottery sherds (Fig. 50: 17–19), two from the Lower Operation, and a ceramic bead (Fig. 50: 14) are among the small finds. Finally, we have a rim fragment from a glass beaker (Fig. 50: 16) from Square D50, and a small, gilt silver belt buckle (Fig. 50: 15), most likely of recent Ottoman date, found in same square's topsoil.

ENVIRONMENTAL INVESTIGATIONS

An important, but sometimes underutilised, component of archaeological research is the study of ancient plant remains from archaeological sites. Archaeobotanical analysis can provide valuable information on ancient crop choices, past diets, landscape use, agricultural techniques and subsistence strategies. In the Caucasus, archaeobotanical studies are relatively rare in comparison to the Near East. After considerable research during the Soviet period, very few archaeobotanical investigations have been conducted in the Caucasus and have only become more common, particularly in Armenia, in recent years.⁷⁶ For Georgia, a number of palynological and micro-remain studies of archaeological sites have been published, however there have been no similar archaeobotanical reports from Georgian sites in the last ten years.⁷⁷ Indeed, there is a general absence of published archaeobotanical reports of systematically sampled Kura-Araxes sites from the Caucasus nor has particular reference been made to the plant economy of the Kura-Araxes in general. This in has been part due to an assumption that Kura-Araxes were transhumant pastoralists.⁷⁸ Recent archaeozoological research contradicts this assumption and instead indicates that the Kura-Araxes had a mixed economic strategy that minimised risk and, in some regions, incorporated year round site occupation.⁷⁹ A more nuanced understanding of the Kura-Araxes agro-pastoral economy will only be achieved through integrated programmes of archaeobotanical and archaeozoological research.

Archaeobotanical research, including pollen, phytolith, and plant macroremains analysis, has been initiated at Chobareti to investigate the agricultural strategies, crop selection and landscape use of the Kura-Araxes in the late fourth millennium BC in a high altitude region in the southern Caucasus. To evaluate the diet of humans and animals in such a sub-alpine environment, isotopic analyses were also carried out on zoological and anthropological remains.

⁷⁶ For summaries of work conducted prior to 1991 see Lisitsina and Prishchepenko 1977 and Wasylkowae *et al.* 1991. For more recent reports from Armenia see Badalyan *et al.* 2010, Hovsepian 2009, 2010, 2011, Hovsepian and Willcox 2008 and Wilkinson *et al.* 2012 and for Nachivan Ristvet *et al.* 2011.

⁷⁷ Kvavadze *et al.* 2004, Kvavadze *et al.* 2007, Kvavadze and Kakhiani 2010.

⁷⁸ Kushnareva 1997 p. 195.

⁷⁹ Howells-Meurs 2001, Monahan 2007 and Piro 2009.

THE 2011 ANALYSES AND RESULTS

Sampling

Archaeobotanical remains

During the 2011 fieldwork, Pits 16, 17 and 18 were sampled for botanical analysis.

- For pollen and phytolith analysis, five samples were collected from the lower part of Pit 17 every 10 cm, and six samples were taken from the lower part of the Pit 18, using the same principle.
- For plant macroremains analysis, sediments were collected from the three pits. The sampling is detailed in the following table:

Structure	Ashy layer of Pit 16	Lower part of Pit 17	Upper part of Pit 17	Lower part of Pit 18	Upper part of Pit 18
Volume	4.9 litres	8.7 litres	12 litres	12.5 litres	10.5 litres

Bones for isotopic analysis

In total, 17 animal and humans bones were collected from occupational and funerary contexts respectively. Human bones were selected in collaboration with Liana Bitadze (Institute of Anthropology, Tbilisi, Georgia). The material corresponds to eight individuals from six burials excavated in 2009. Samples of skull fragments and phalanxes were collected for each individual. They belong to six adults and two children aged from five years old and one year old. Animal bones were selected during the 2011 excavation on behalf Kakha Kakhiani and they comprise nine fragments (eight *Bos* sp. and one *Ovis* sp).⁸⁰

Methods

Archaeobotanical investigations

Pollen and NPP analysis

Pollen samples were prepared using a 10 per cent solution of potassium hydroxide (KOH), followed by heavy liquid separation and standard acetolysis.⁸¹ Pollen and non-pollen palynomorphs (NPP) identifications were made with reference to atlases⁸² and the modern reference collection of the Institute of Palaeobiology of Georgian National Museum.

⁸⁰ We thank J. P. Brugal and A. Bruguères, UMR 7269 – LAMPEA, Aix-en-Provence, France, for the identification of the bones.

⁸¹ Faegri and Iversen 1989.

⁸² Reille 1992, 1995, 1998; Beug 2004; van Geel 1998; van Geel and Aptroot 2006.

Phytolith analysis

Phytoliths were extracted from sediment samples using the standard method.⁸³ Where possible, more than 300 diagnostic phytoliths were counted per sample. Thirteen different categories of phytolith were identified according to their morphology, following several systems⁸⁴ and the International Code for Phytolith Nomenclature.⁸⁵ Silica skeletons corresponding to fragments of Poaceae epidermis were also identified and counted.

Plant macroremains analysis

A total of 34.2 litres of sediment were processed in the laboratory of the University of Geneva (Switzerland). Sieves with mesh sizes 4, 2 and 0.5 mm were used. All residues were dried and plant remains were sorted and extracted. Seeds, fruits and other plant macro-remains were identified using the modern reference collection of plant material of the Institute for Prehistory and Archaeological Sciences (IPAS) at Basel University (Switzerland), as well as specialised literature.⁸⁶ Additional samples recovered from Pit 18 (14.4 litres) were sieved in the field using a flotation machine built in 2012 (see below).

The 0.5 mm organic fraction of Pit 16 was sub-sampled because of its richness in plant macrofossils. Chaff was sorted in 10 per cent of the sample; other macro-remains in 25 per cent of the sample; remarkable elements in the whole sample. The numerical values for each group were extrapolated to the total volume of the sample applying a correction factor of x10 and x4 according to the used division.

Isotopic analysis

Carbon and nitrogen stable isotopes are biomarkers used to restore the trend of diet. Measured on collagen, those markers permit to assess the nature of proteins consumed because the isotopic characteristics of food items are recorded in consumer tissues.⁸⁷ Carbon stable isotope ratios are in relation with the photosynthetic pathway of plants and can discriminate plants from temperate environment using the C₃ photosynthesis and plants using C₄ photosynthesis like millet.⁸⁸ Carbon stable isotope ratios can also discriminate terrestrial and marine proteins.⁸⁹ Nitrogen stable isotopes permit to assess the trophic level of an individual within its foodweb because the more animal proteins are consumed the higher are the isotopic values.⁹⁰ The enrichment in heavy isotopes between food items collagen and tissue consumer's collagen are 0–1 per cent for carbon and 3–5 per cent for nitrogen.⁹¹ As isotopic measurements were run on bone collagen a picture of the diet of the last moments (10–15 years) of their life is discussed.⁹² Collagens preservation have been verified using 4 criteria: yield of extraction, above mg/g, the percentages in carbon and

⁸³ Lentfer and Boyd 1998.

⁸⁴ Twiss *et al.* 1969; Mulholland 1989; Fredlund and Tieszen 1994.

⁸⁵ ICPN Working Group *et al.* 2005.

⁸⁶ Anderberg 1994; Cappers *et al.* 2006.

⁸⁷ Katzenberg and Saunders 2008.

⁸⁸ Smith, Epstein 1971.

⁸⁹ DeNiro and Epstein 1978; Schoeninger and DeNiro 1984.

⁹⁰ DeNiro and Epstein 1981.

⁹¹ Bocherens and Drucker 2003.

⁹² Hedges *et al.* 2007.

nitrogen, respectively above 30 per cent and 11 per cent and the carbon to nitrogen atomic ratios, between 2.9 and 3.6.⁹³

Results

Palynological investigation (*Eliso Kvavadze and Inga Martkoplshvili*)

In the pollen spectra from both Pits 17 and 18, pollen of wheat and other Cerealia are predominant (Figs. 58–59). Pollen grains of wheat crop weeds were also found (*Polygonum*, *Convolvulus*, *Carduus*, *Centaurea*, *Dipsacus*). Coniferous trees such as *Pinus* (pine), *Picea* (spruce) and *Abies* (fir) essentially represent the group of arboreal pollen. Pine is predominant, although there are also large quantities of fir (*Abies nordmanniana*) in the lower part of the Pit 18 (Fig. 59). A similar situation was revealed in the investigation of other grain pits and burials,⁹⁴ where fir pollen was found in significantly larger quantities than spruce. In the group of non-pollen palynomorph (NPP), parenchyma cells of wood are main category among the pine wood cells (Figs 60–61). Spores of *Glomus*, fungus that settles only either on tilled or erosion soils,⁹⁵ are well represented in the Chobareti spectra. In the archaeological context, *Glomus* spores can be considered a good indicator of agriculture.⁹⁶ In Pit 18, there are many spores of the fungus *Glomus*, however, in the upper part, the content of spores of dung fungi *Sordaria* and *Arniium* increases significantly, which is also suggestive for transformation of a grain pit into a refuse deposit. Another interesting feature of the NPP spectrum is that in all samples, the remains of insects and mites were found. The characteristic feature of the spectra is the presence of flax textile fibres among which there are black and blue fibres. Hemp and wool fibres were also found. Of great interest is also the fact that the maximum quantity of flax fibres, including dyed ones, was found at the very bottom of the Pit 17, which suggests that the pit bottom was covered by flax fabric for the purpose of hygiene.⁹⁷

Phytolith analysis (*Erwan Messager*)

The sediments sampled in Pits 17 and 18 yielded relatively homogenous phytolith assemblages (Fig. 62). Grasses (Poaceae family) are the dominant taxon in all phytolith samples. In this group, elongate and acicular morphotypes are preponderant while short acicular and bulliform are rare. Rondel and sinuate are well-represented. They correspond to Pooideae sub-family, the main group of Poaceae in temperate areas. Bilobate phytoliths are frequently recorded attesting of the occurrence of the subtropical subfamily: Panicoideae. Owing to the high values in 'Elongate dendritic' phytolith morphotype, the assemblages from Pits 17 and 18 are rather different from natural phytolith assemblages. This class of phytolith is known to come from chaff (glumes and lemma) of Gramineae (such as cereals) and is especially abundant at archaeological sites where cereals have been processed (threshing, dehussing and similar activities). Moreover, the significant

⁹³ DeNiro 1985; Ambrose 1990; van Klinken 1999.

⁹⁴ Kvavadze et al. 2010, 2011.

⁹⁵ Geel 1998; Geel and Aptroot 2006.

⁹⁶ Kvavadze et al. 2011a, b.

⁹⁷ Cugny et al. 2010; Gelorini et al. 2011; Menozzi et al. 2010.

amount of silica skeleton (linked phytoliths), corresponding to the fragmented epidermis of Poaceae in the assemblages, show that stems and chaff were probably threshed.

Plant macroremains analysis (*Lucie Martin*)

The preservation of plant macroremains is exclusively due to carbonisation. Almost 50 litres of sediment provided more than 11,000 plant remains (Fig. 63). It represents an average of 233.7 items/litre but concentration varies from 6.3 in Pit 18 to almost 2000 items/litre in ashy layers of Pit 16. We attested 44 different taxa, of which 16 identified as species.

The assemblage is composed of caryopses and cereals chaff and of wild plant seeds. Four groups were identified:

- Domesticated plants, represented only by cereals. This group includes einkorn (*T. monococcum*), emmer (*T. dicoccum*), naked wheat (*Triticum aestivum/durum/turgidum*, for short, “*nudum*”), barley (*Hordeum vulgare/distichum*) sometimes hulled, and maybe millet (*Panicum miliaceum*); the presence of well preserved rachis fragments allows us to identify naked wheat as a hexaploid form, from the type *aestivum*.
Cereals are quite badly preserved: most of them are identified as Cerealia type, *Triticum/Hordeum* or *Triticum* sp. and groups of species like *Triticum monococcum/dicoccum* or *Triticum dicoccum/nudum*”;
- Trees and shrubs, attested by a few seeds: one of *Rosa* sp., one of *Rubus* sp. and several fragments of yew seeds (*Taxus baccata*);
- Ruderal and arable-weeds, dominated by different *Chenopodium* (*C. album* and *C. hybridum*), *Fallopia convolvulus* and *Galium* (*G. aparine* and/or *spurium*); we also determined *Avena* sp., *Buglossoides arvensis*, *Euphorbia* sp. and *Euphorbia helioscopia*, *Hyosyamus niger*, *Papaver* sp., *Polygonum* sp., *Polygonum aviculare*, *Rumex* sp. and *Urtica dioica*;
- A group of various taxa (Miscellaneous), identified for most of them as family group; it includes *Bromus* sp., Brassicaceae, *Carex* sp., Caryophyllaceae, Fabaceae type *Trifolium* and *Vicia*, Lamiaceae, *Poa* sp., Poaceae, Polygonaceae, Rosaceae type *Potentilla*, *Teucrium* sp. and maybe *Teucrium botrys*.

Representing more than 90% of the assemblage, cereals caryopses and chaff are clearly dominating in the three pits, obviously used to store cereals and products from crop processing. The hypothesis of this function is strengthened by the presence of common arable weeds such as *Chenopodium album* (white goosefoot), *Fallopia convolvulus* (black bindweed), *Euphorbia helioscopia* (sun spurge) or *Polygonum aviculare* (prostrate knotweed).

In general, *Triticum* (wheat) is the most important cereal while *Hordeum* (barley) and maybe *Panicum* are found in anecdotal quantity: they could be for example residues of old cultivations. Within *Triticum*, it seems that *Triticum dicoccum* (emmer) and *T. aestivum/durum/turgidum* (naked wheat) — probably the hexaploid form — are the most cultivated species. Emmer predominates in Pits 17 and 18 while naked wheat is more important in Pit 16 (Fig. 64).

The three pits show high amounts of chaff, especially in Pit 16, where only 6.8 per cent of wheat remains are caryopses. The assemblage is composed of rachis and awn (not counted) fragments, spikelet forks and glume basis, probably waste products of threshing. Together with caryopsis and

small weeds seeds, it is an evidence of cereals processing on the site. These secondary products can be stored and used for fuel or forage.

Dietary practices of humans from Chobareti (*Estelle Herrscher*)

Human and animal bones present yields of extraction above 15.6 mg/g ($m = 63.7 \pm 27.5$ mg/g, $n = 17$). The percentages of carbon and nitrogen are above the limits required (percentage C: 39.9 ± 1.7 per cent; percentage N: 15 ± 0.7 per cent) and the C/N ratios have a mean of 3.2 indicating a well preservation for all collagen samples. Carbon isotope values range from -20.5 to -18.9 per mill for animals ($n = 9$) and from -19 to -18.1 per mill for humans ($n = 8$) (Fig. 65). The $\delta^{13}\text{C}$ values would indicate a consumption of food items coming from an environment constituted mainly by C_3 -plants. The possible millet consumption for animals or for humans does not appear significantly in the carbon isotope variability. The animal nitrogen isotope values ($\delta^{15}\text{N}$) range from 3.3 to 8.1 per mill present variability in agreement with their herbivorous diet. The human $\delta^{15}\text{N}$ values, from 9.8 to 13.9 per mill, exhibit a wide dispersion, owing to the one year-old child, who was probably breastfed at death. Despite a small sample, the human isotopic variability highlights a homogeneous dietary practice. The dietary economy seems mainly to indicate the exploitation of livestock nourished by C_3 -plants, as well as a direct consumption of cereals as wheat or barley. The nitrogen isotopic mean enrichment of 4.7 per mill between the local animal and humans suggests an important consumption of animal proteins that could suggest a greater exploitation of livestock products than farming products. Curiously, however, the total quantity of animal bones so far recovered from Chobareti is very small. By contradistinction, the number of querns (and quantity of cereal macroremains) is considerable for the area exposed.

Conclusions based on the 2011 data

The first archaeobotanical and isotopic investigations performed at Chobareti site has answered several questions concerning subsistence activities and land use in subalpine environment of the south Caucasus during the Early Kura-Araxes period. All botanical data, including pollen, phytolith as well as plant macroremains, indicate that the Chobareti population was engaged in agriculture. Cultivated crops were essentially wheat, in particular *Triticum dicoccum* (emmer) and *Triticum aestivum* (naked wheat). Threshing process is attested on the site by phytolith as well as macroremains assemblages, widely dominated by chaff. The occurrence of grain grinders on the site shows that the *chaîne opératoire* of cereal processing was completed on the site. Pits 16, 17 and 18 were probably, in a first instance, storage pits (silos), filled with the refuse from the threshing process. All botanical data demonstrate that the Chobareti community was an efficient farming group, able to grow wheat up to 1500 m asl. The importance of agriculture and particularly crop cultivation in the Javakheti uplands is further reflected even at death, when pots filled either with wheat porridge or raw grain were placed in the grave with the deceased.⁹⁸

Carbon and nitrogen stable isotope analyses conducted on animal and human remains reveal a coherent consumption of vegetal and animal food items from a C_3 plant ecosystem for both of them. Such results indicate bovids and ovid either were feed by humans on cultivated cereals (wheat or barley) or they were grazing land without specific grasses such as millet. The human

⁹⁸ Kvavadze *et al.* 2011, 2012.

isotopic dispersion suggests a similar dietary practice within the group. Meat consumption was possibly local livestock, although the small sample analysed precludes the identification of species preferentially consumed. Even if a high enrichment in ^{15}N between animals and humans would be in agreement with a high consumption of animal proteins, it is clear that the Chobareti community also consumed cereals and legumes.

THE 2012 ANALYSES AND RESULTS

A Flotation Tank For The Caucasus (*Catherine Longford*)

As part of the 2012 Chobareti field season a flotation machine was constructed to enable the processing of soil samples for archaeobotanical analysis. The machine is a modified Siraf machine modelled on those used at Kaman Kale Höyük and Çatal Höyük.⁹⁹

Flotation was conducted in a household garden in the village of Zveli. In order to maintain adequate water pressure and, so as not to flood the nearby vegetable patch, the flotation machine was designed to recycle water in a closed system. Flotation machines operate according to basic principles. When soil is added to a tank filled with water, light material, including charcoal, separates from the soil, floats to the surface of the water and is then caught in a fine mesh as it flows over the spout. Heavy elements in the soil sample sink into a mesh lining the tank and are collected; smaller particles fall to the bottom of the tank. In a recycling system, the water that flows over the spout and through the fine mesh, pools in the two settling tanks and is then pumped back into the main flotation tank via internal sprinkler pipes.

Most of the components of the flotation tank were obtained from plumbing stores in the nearby town of Akhaltsikhe.

A local plumber was hired to help construct the machine. The flotation tank was made primarily from plastic. This proved to be beneficial in terms of manoeuvrability and construction; however, there is a risk of deformation if the tank is not positioned on a level surface. A 200 litres plastic barrel was selected for the main tank. Two large water tanks, one 400 litres the other 300 litres were used as settling tanks for the silt and as water reservoirs to run the system. These needed to be modified by removing the top of the tanks with an electric saw, to permit water flow. The pitched roof of the 400 litres tank was fashioned into a spout and reattached with bolts and silicone sealant to the side of tank for water to flow into 300 litres tank. Water was pumped from the 300 litres tank into the main flotation barrel using a 240 volts electric water pump. **Figure 66: 1–3** shows the layout of the flotation system. Accurate dimensions are provided, however these should only be used as a guide if making a replica system.

Water entered the main barrel through a plastic sprinkler system of tubes inside the tank. The rose of pipes was made into a branching T-shape using PPR plastic pipes and fittings (**Fig. 66: 4**). These pipes were hand welded together with the assistance of local plumber, Nugzavi Diasamidze. Two nails acted to support the rose in the barrel. Perforations, 2mm in size, were made in the rose pipes with a thin nail. Jets of water from the sprinkler help lift any charcoal that maybe in suspension

⁹⁹ For the Siraf Machine see Williams 1973, the design at Kaman Kalehöyük see Nesbitt 1995, and Çatal Höyük see Hastorf and Near 1997. The construction of the flotation machine was also influenced by many discussions held over the years with Glynis Jones, Mike Charles, Andrew Fairbairn, Gemma Martin and Ellen Simmons.

to float to the surface of the water. Water pressure can be increased through the sprinklers by using a graduated series of pipes decreasing in diameter as they enter the barrel and form the rose. Ball valves were used to control the water flow into the main barrel either via the pipe rose or a hose and spray gun. The hose and spray gun were attached to a diversionary pipe to permit targeted spraying of the sample in the barrel (Fig. 66: 5). A spout was created at front of the tank, using a flat panel of the already cut 400L tank roof and wood. This was screwed on to the barrel and the edges sealed with silicon. In order to catch the light fraction as it floated over the spout of the main barrel, a thin synthetic cloth, or chiffon, with a c.200 μ m weave, was pegged to line a bucket with its base removed. The bucket was suspended beneath the spout by string looped around the rim of the barrel (Fig. 66: 6). Inside the main barrel a 2 mm flexible mesh, often sold as fly screen for windows, was used to catch the heavy residue. This was pegged to the rim of the barrel and the spout. Silt must be emptied from the flotation tank regularly to prevent it from accumulating above the rose and blocking the pipes. To enable discharge of the silt, a large 2.5 inches wide pipe was attached at the base of the tank via a ball valve used to regulate the flow.

The excavators collected samples for archaeobotanical analysis on-site from sealed floor levels and areas of interest. A minimum of 20 litres was collected per sample and transported to the flotation area in sugar sacks. One label recording the sample information was tied to the outside of each sugar sack and another was placed inside the sack with the soil. The volume of each sample was recorded using a calibrated bucket prior to flotation. All the tanks were filled with water from the household spring, to the point at which water was almost ready to flow over the spouts of the flotation and first settling tanks. Soil was slowly added to the flotation tank a couple of litres at a time. It is advisable not to overfill the flotation tank with soil as the weight of the heavy residue can tear the flexible mesh and also impede charcoal from floating to the surface. Any large rocks were removed as they entered the water to prevent breakage of the flexible mesh. Once charcoal was visible on the water surface the electric pump was started and the inlet valve attached to the rose opened. Floating material then flowed over the spout and into the chiffon lining the bucket beneath the spout. Additional agitation of the sample was provided by hand to encourage the disaggregation of soil clumps and by the spray gun. When no more material floated to the surface, nor remained in suspension in the water, the inlet valves were closed; the chiffon was removed, tied with a label and hung in the shade and the heavy residue laid out to dry on a labelled sugar bag. For large samples it was necessary to split the light fraction over multiple labelled chiffons and periodically empty the heavy residue onto labelled sugar sacks as the mesh became too full. When dry, the light fractions were transferred to labelled resealable plastic bags and the chiffons cleaned and reused. The dried heavy fraction was sorted in the field for finds and sunken botanical material.

Overall, the flotation system operated well. It cost 625 Georgian Lari and took three days to produce. At an optimum level, with two people operating the flotation machine, 100 litres of soil was processed each day. Over the 2012 season, the main tank needed to be cleaned after processing approximately 200 litres of soil on average, although the silt accumulation can vary according to the sample composition. The settling tanks did not need to be emptied until the end of the field season. Being primarily made of plastic the flotation machine was easily manoeuvrable when empty, however, it was susceptible to deformation. When removing the rooves of the settling tanks it was discovered that it is import to leave a portion of each roof intact to provide structural rigidity otherwise the tank could warp with the weight of the water, as occurred with the 400 litres

settling tank. Buckling is also preventable if the tanks are placed on a level surface. One modification of the design could be to position a removable shelf or grid above the sprinkler rose inside the main barrel to support the flexible mesh and prevent it from tearing, as the heavy residue weighs it down.¹⁰⁰ If an electricity source is unavailable a petrol pump could be used, instead of an electric pump. In locations where water recycling is unnecessary the design of the main barrel would remain unchanged although the settling tanks would not be needed. Water could either be continuously sourced from a tap or, if the pressure was insufficient, pumped from a reservoir.

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In the 2012 season, eighteen samples were floated with an average soil volume of 38 litres. Investigation of the 2012 charred plant remains from Chobareti is currently at a preliminary stage. The material was transported to the Department of Archaeology at the University of Sheffield for study. In the laboratory, samples were separated into coarse and fine fractions using 1 mm and 0.3 mm sieves. Initial analysis of samples from trench F42 locus 103 has identified a large quantity of free threshing wheat grains (*Triticum aestivum/durum*), few hulled barley grains (*Hordeum ulgare/distichum*) and rare crop weeds including *Lolium sp.*, *Fallopia convolvulus*, and *Silene sp.* No free threshing wheat rachises were found in the samples to identify the type of free threshing wheat present nor did the preservation of the barley grains permit the distinction of six or two row barley. The high proportion of free threshing wheat grains in comparison to weed seeds, the lack of cereal chaff and the presence of insect damaged grains suggests that the material represents part of a cleaned and processed supply of free threshing wheat stored in the building. Similar crop assemblages have also been found at the late fourth millennium Kura-Araxes sites of Gegharot¹⁰¹, Arapan III¹⁰² and Tsaghkasar¹⁰³ in Armenia and Sos Höyük¹⁰⁴ in Northeastern Anatolia. These high altitude sites, together with the material from Chobareti, show a marked consistency in the crops cultivated. Future analysis of archaeobotanical material from Chobareti will seek to investigate trends in Kura-Araxes crop choices. As more of the site is excavated, systematic sampling for archaeobotanical remains will help to explore the nature of agricultural activity at the site, trying to identify areas of crop production, processing, storage and consumption. Future archaeobotanical research at Chobareti will provide important information on the plant economy of the Kura-Araxes in Georgia, a relatively under researched aspect of the Kura-Araxes culture in the Caucasus.

CONCLUSIONS

Chobareti is providing a detailed picture of ancient life in the high altitudes of the southern Caucasus. Its topography is distinctive — a saddle bookended by two rocky knolls — and its position is strategic, overlooking the Kura River valley not far from where it meets the Uraveli. At present two main periods are represented: the late 4th millennium (ca. 3300–3000 BC) and the late Antique and Medieval period. In addition, Burial 9, the jar burial found beneath the floor of Structure 4, offers

¹⁰⁰ This design is shown in Nesbitt 1995.

¹⁰¹ Hovsepyan 2009, pp. 97–101.

¹⁰² Hovsepyan 2010.

¹⁰³ Hovsepyan 2011.

¹⁰⁴ Longford, Drinnan and Sagona 2009.

the tantalising possibility that Chobareti may have an earlier (and probably thin) Late Chalcolithic settlement. This may also explain the few pieces of orange ware found in certain pits, which presumably cut the earliest occupation. If this turns out to be the case, Chobareti could provide evidence for the elusive stratigraphic link between the Kura-Araxes tradition and its antecedents. The Kura-Araxes settlement is important for several reasons. First, it is a good example of a terraced site, which includes an unusually large, curvilinear building, a substantial number of pits, and a growing number of burials. Second, it is a fully agricultural site, which has yielded a conspicuously small quantity of animal bones. This fact alone will require us to re-think the subsistence economy of highland Kura-Araxes communities, traditionally viewed as pastoral settlements. Third, we have a Kura-Araxes ceramic assemblage from the settlement and pits that is predominantly pale brown in colour, and found associated with a small quantity of Chaff-Faced Ware and Sioni ware. By contradistinction, the burials have ceramics fired to a black-and-red colour scheme, raising the question of their date. If we follow the view that the contrasting colour scheme is intrusive to the southern Caucasus, then the burials may be later. Radiocarbon readings will help resolve this issue, but in any case Chobareti provides us with the circumstances to monitor the usage of pale brown and dark Kura-Araxes ceramics. Finally, the eleven radiocarbon (AMS) dates from reliable contexts enable us to better understand the nuances of cultural change and interaction in this region.

In the Upper Operation, we have begun to expose a stronghold, defended with a substantial stone fortification wall and large buildings. Based on ceramics, the buildings close to the surface are late Antique and Medieval in date, but the date of the perimeter wall is uncertain at this stage. An interesting question we will need to address in the years ahead is the stratigraphic relationship between the fortification wall and the settlement within. Ground-penetrating radar points to another, deeper level. Judging by the few out of context early Iron Age sherds this settlement might belong to the first millennium BC.

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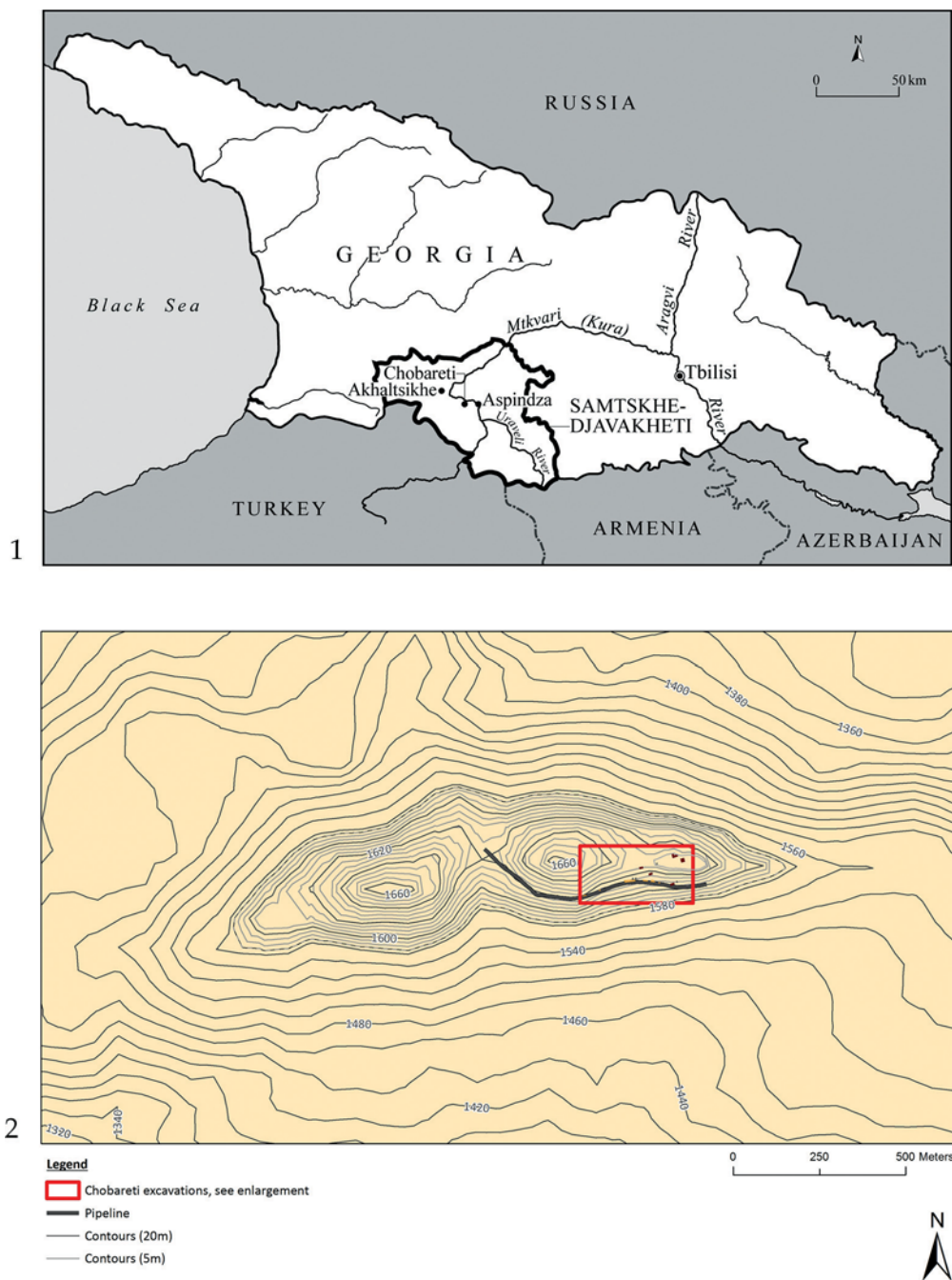


Fig. 1.

1. Map showing the location of Chobareti (produced by Chandra Jayasuriya);
2. Topographical plan of the ancient site of Chobareti (produced by Jessie Birkett-Rees).

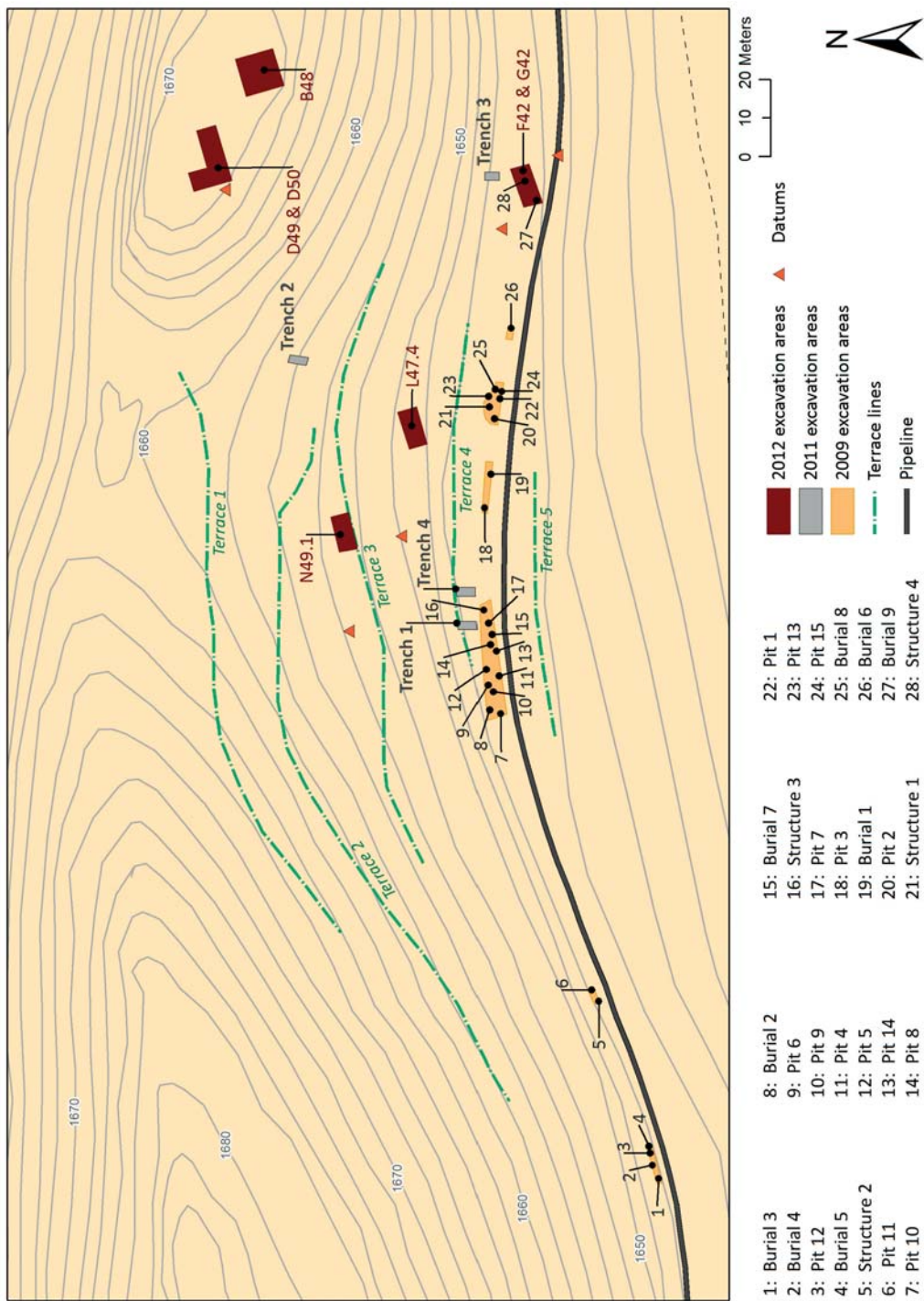


Fig. 2. Topographical plan of Chobareti showing the excavated areas (produced by Jessie Birkett-Rees).

CHOBARETI — Field Book Page 37

Supervisor: AM Date: 13 / 06 / 12

Area: Upper Square: D49.1 Locus/SU: 401

Start Height: _____ End Height: _____

Munsell Soil Colour: 10YR 3/2
Soil Description: loose, dark
Munsell: Very dark grayish brown

Pottery bags/vessels: (8)

Objects (no. & description): _____

Samples (no. & description): S-B (bones)

Photographs: Refer p.40

Comments: Small amount of grass removed from NE corner on 12/06/12 (approx. 1m²) from SE quadrant of D49.1.
Late afternoon of 13/06/12 spent training aerial photography technique, which requires 5-6 people.

CHOBARETI — FIELD NOTEBOOK page 38

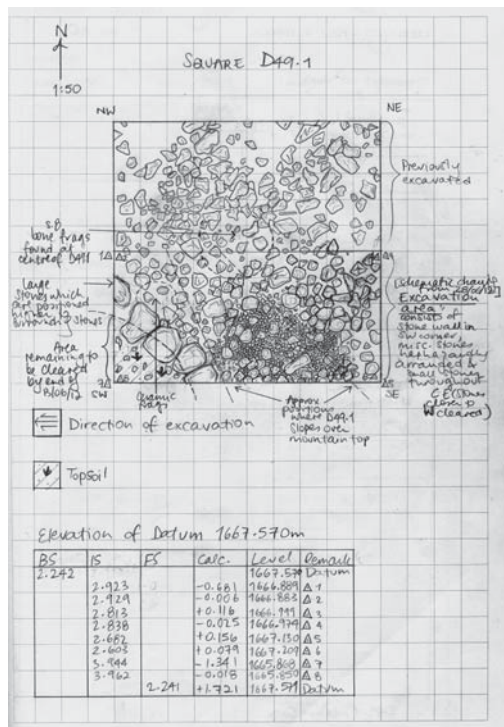
Supervisor: AM

Stratigraphic Matrix:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This context is: 401 It correlates with: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Locus/SU	Full Description (Include: Colour; Texture; Consistency; Coarse Component)	Object Pot bag Sample Nos
<u>401</u>	<u>Day commences w/ clearing southern portion of D49.1 of grass, in E to W direction. Once this is complete, removal of soil undertaken between the rocks which entirely cover this part of the trench. Some clearing and soil removal in central part of trench D49.1 in preparation for aerial photography. Small amount of bones found in centre of D49.1.</u>	<u>(8)</u> <u>S-B</u>
<u>401</u>	<u>Day commences w/ clearing southern portion of D49.1 of grass, in E to W direction. Once this is complete, removal of soil undertaken between the rocks which entirely cover this part of the trench. Some clearing and soil removal in central part of trench D49.1 in preparation for aerial photography. Small amount of bones found in centre of D49.1.</u>	<u>(8)</u> <u>S-B</u>



CHOBARETI — FIELD NOTEBOOK page 40

Photographs (attach below):

Test aerial photographs

CHOBARETI 13.6.2012
SQUARE D49.1
LOCUS 401

Co. D5.3

Area 9 cleared

D49.1, facing South

Fig. 4. Sample of the 2012 Chobareti field notebook.

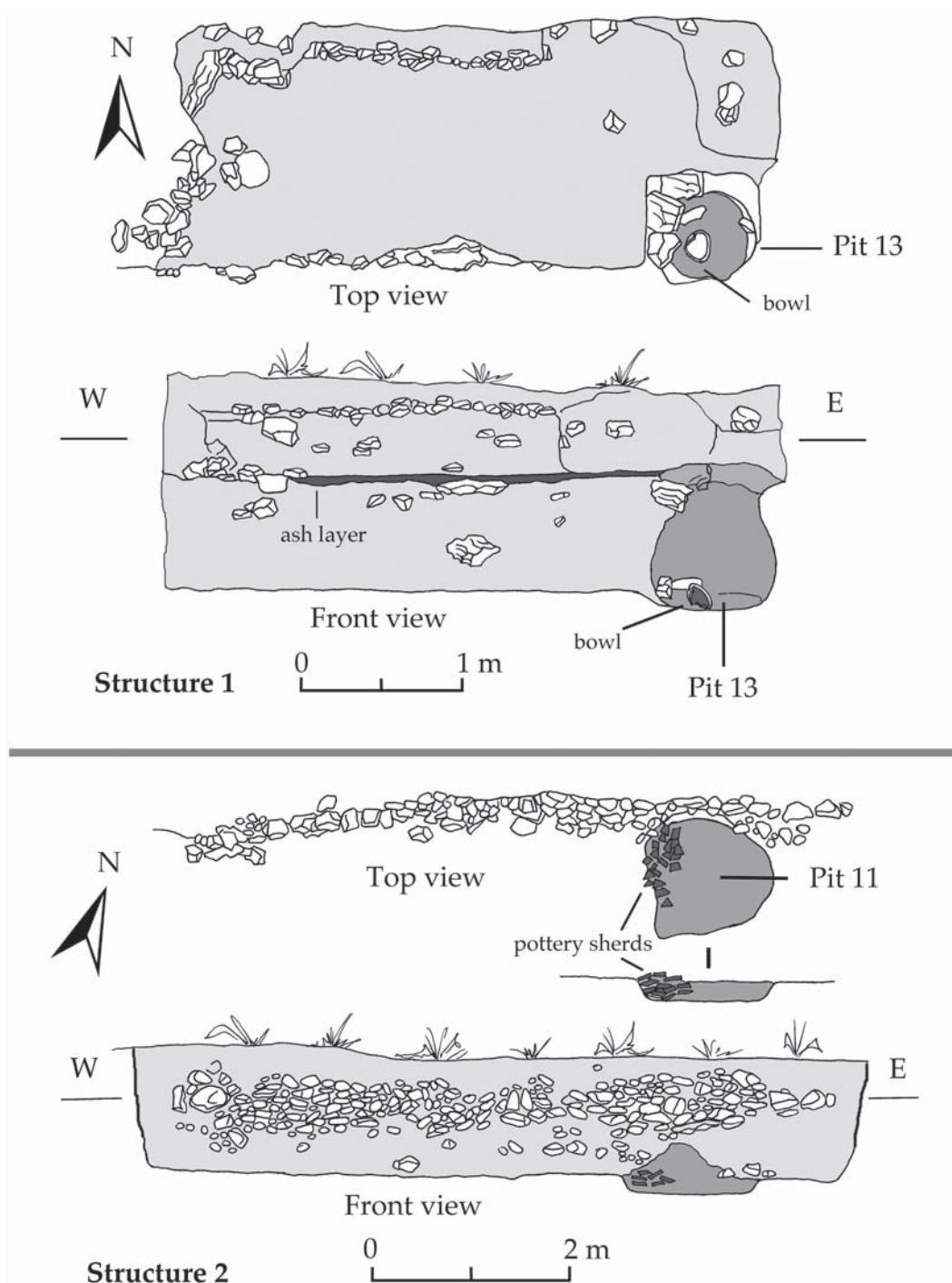


Fig. 5. Chobareti 2009, Structures 1 and 2.

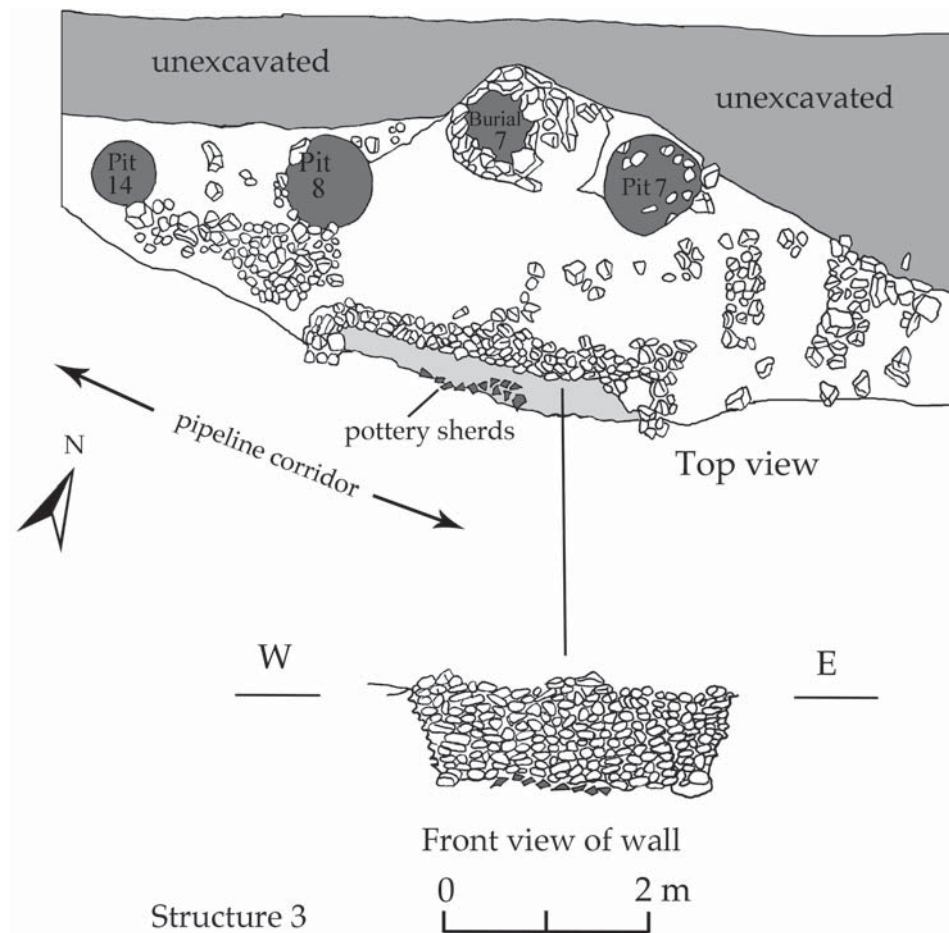


Fig. 6. Chobareti 2009, Structure 3.

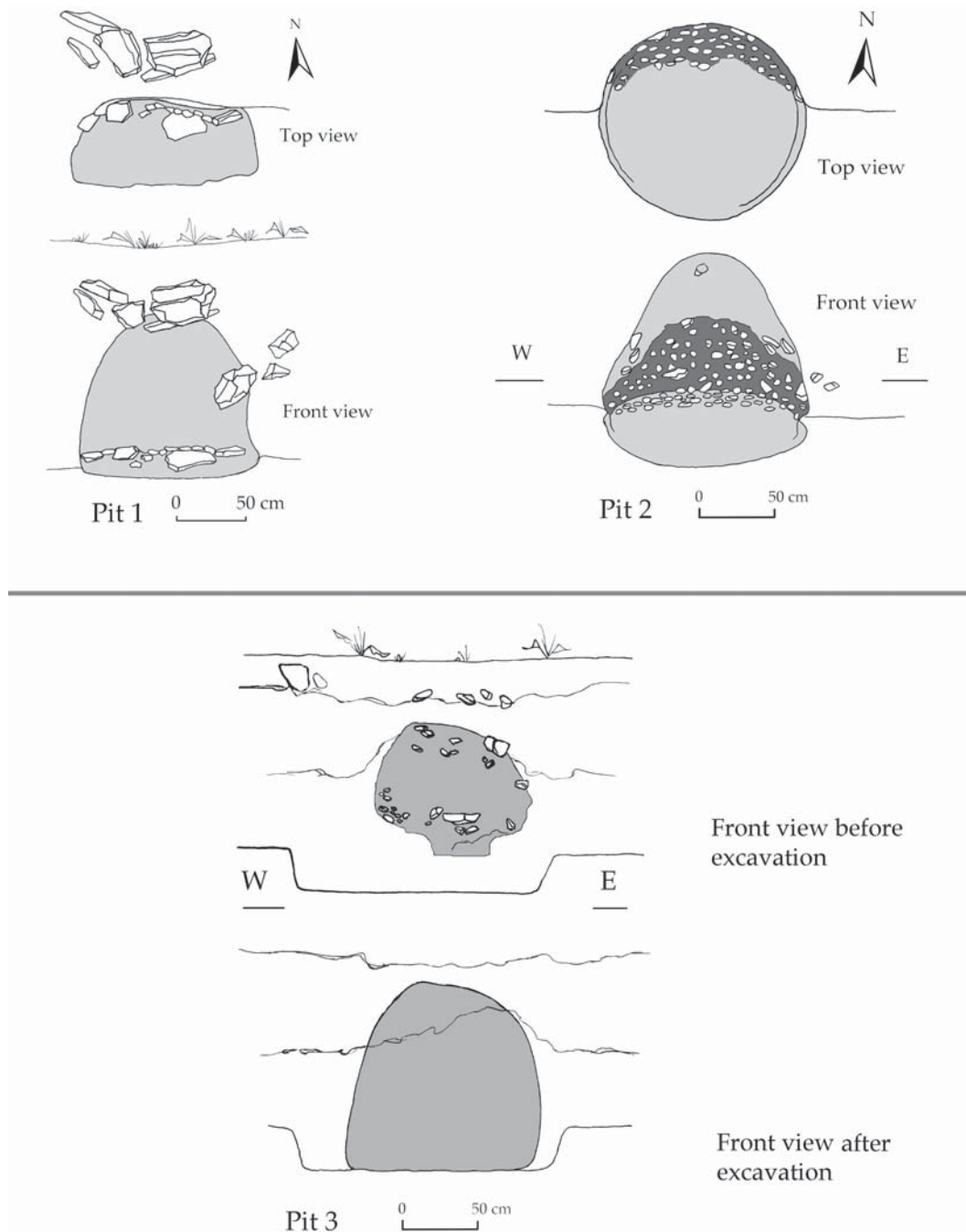


Fig. 7. Chobareti 2009, Pits 1–3.

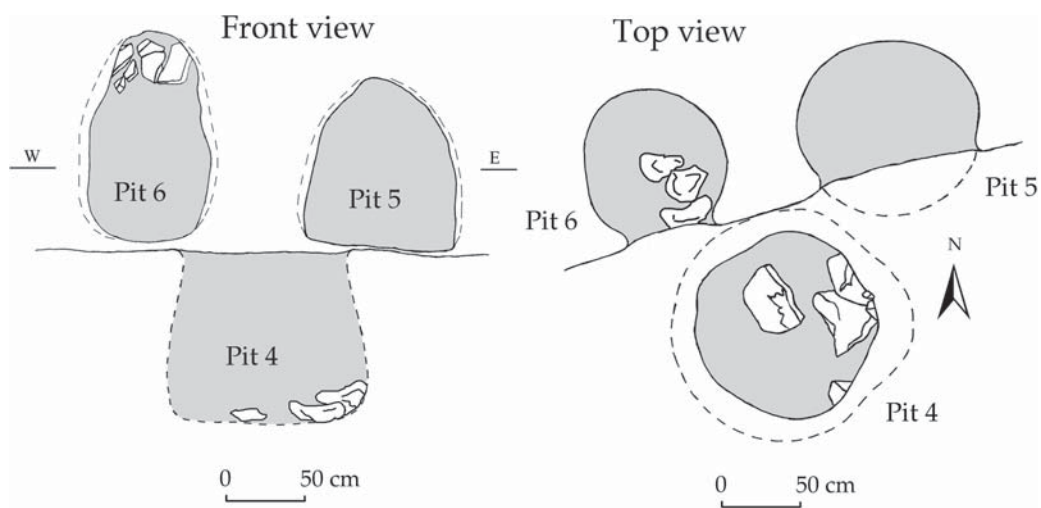


Fig. 8. Chobareti 2009, Pits 4–6.

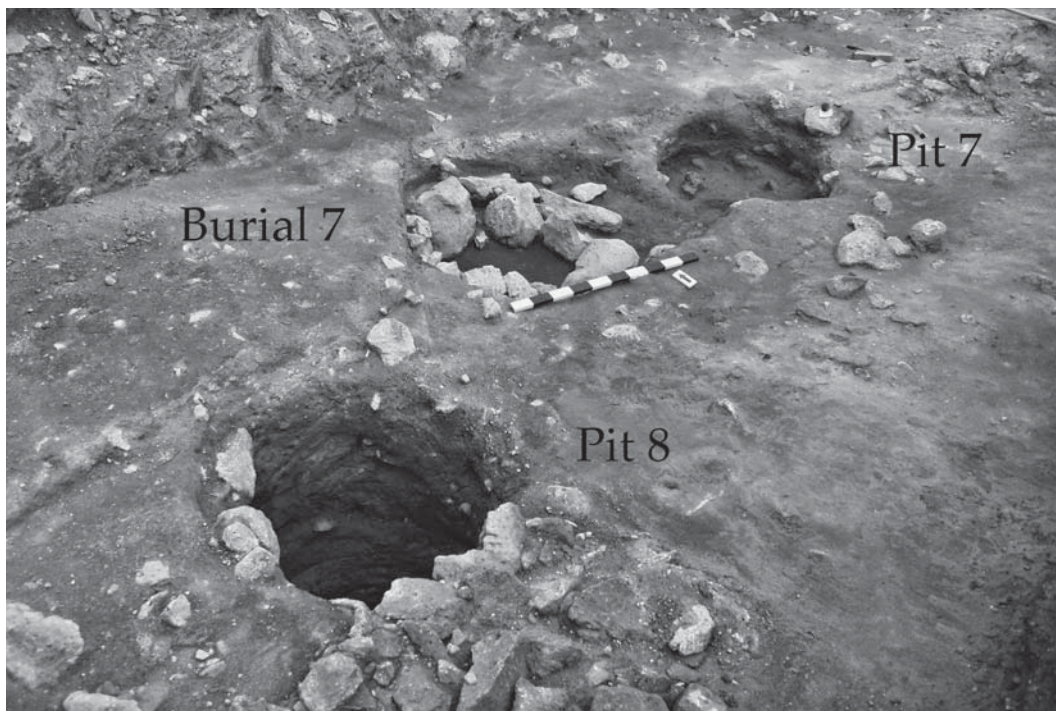
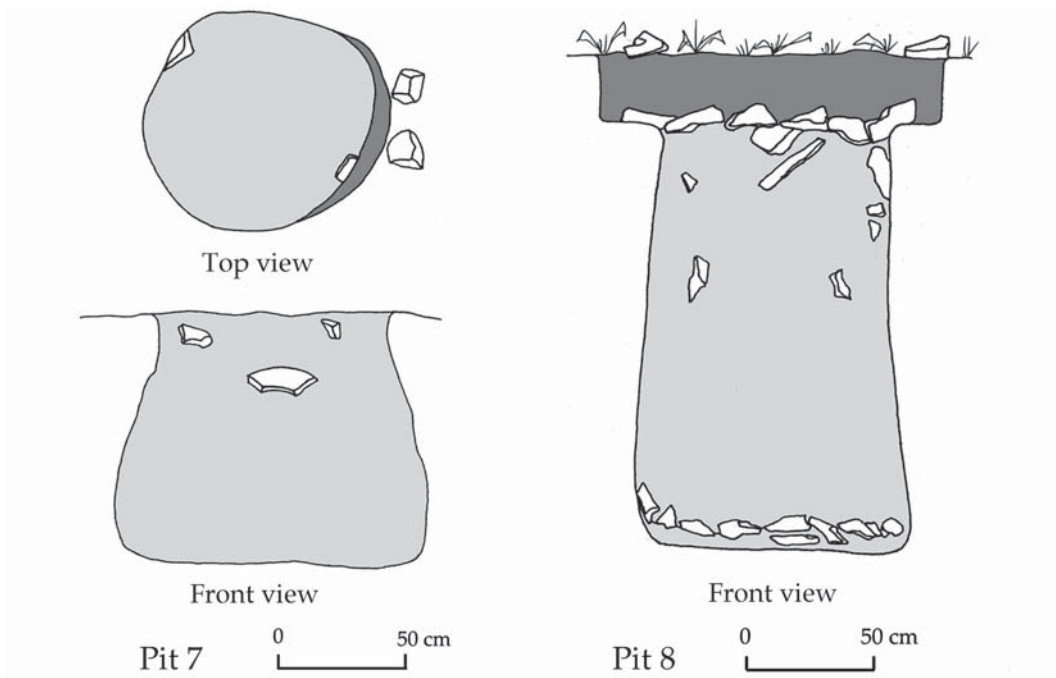


Fig. 9. Chobareti 2009, Pits 7–8.

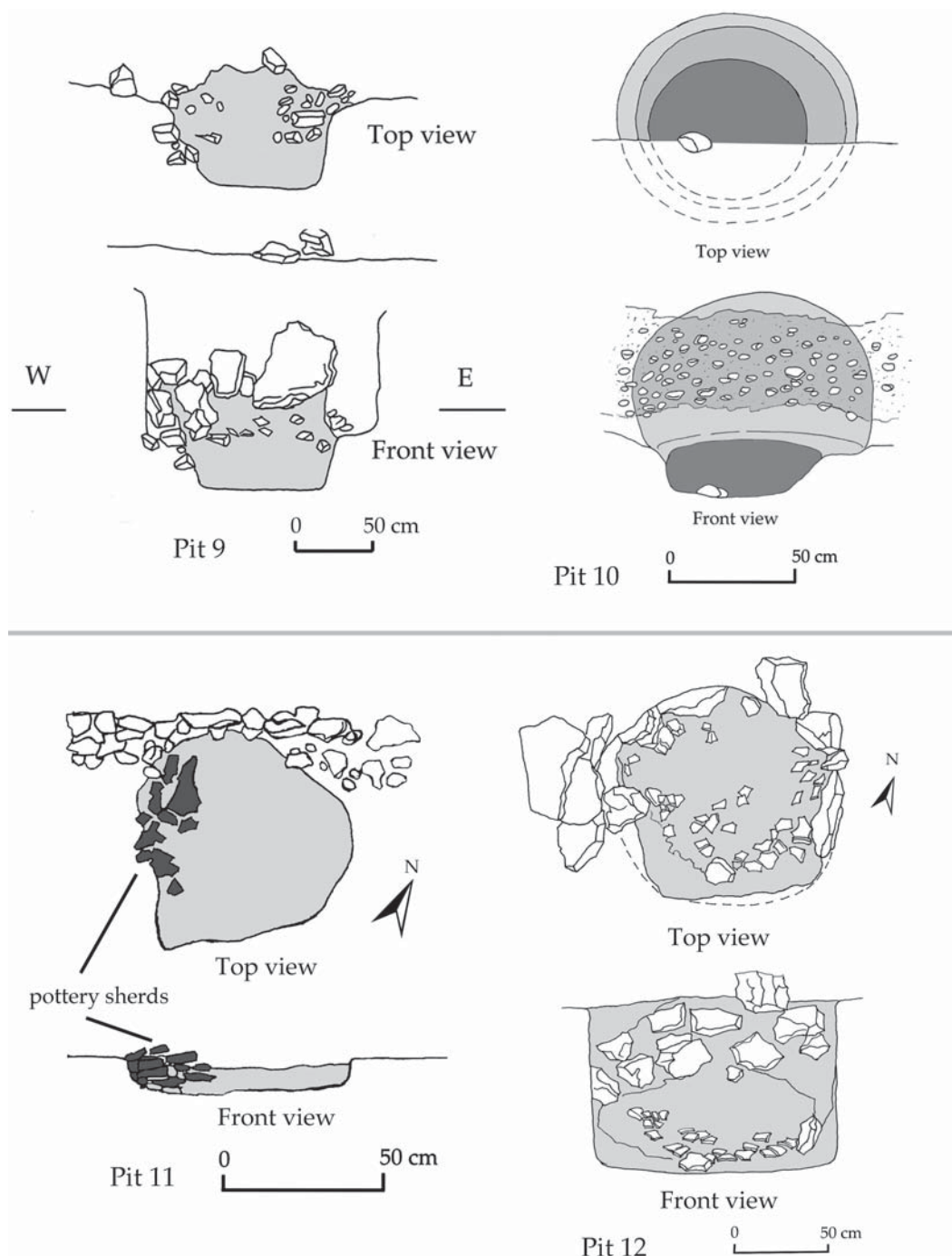


Fig. 10. Chobareti 2009, Pits 9–12.

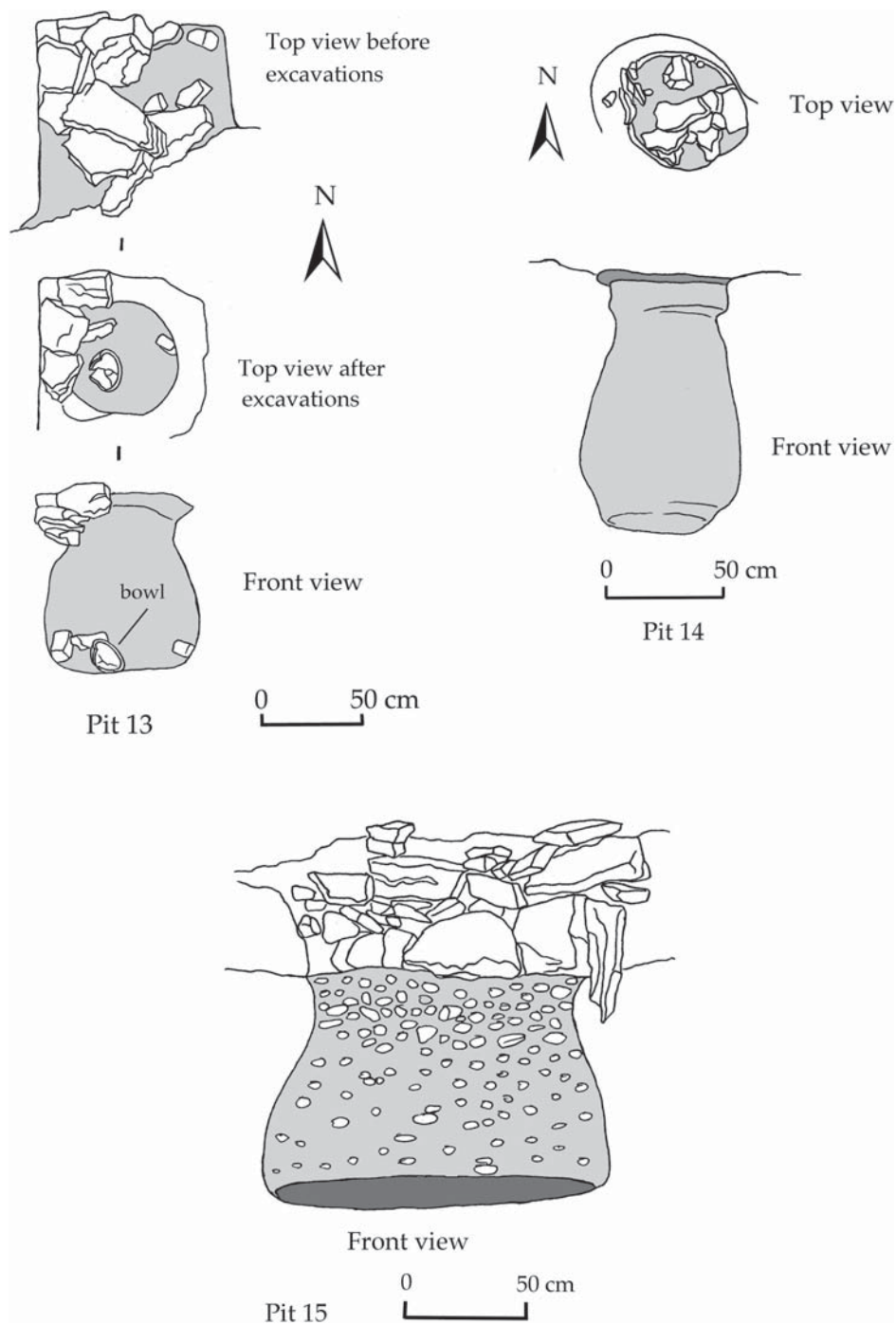


Fig. 11. Chobareti 2009, Pits 13–15.

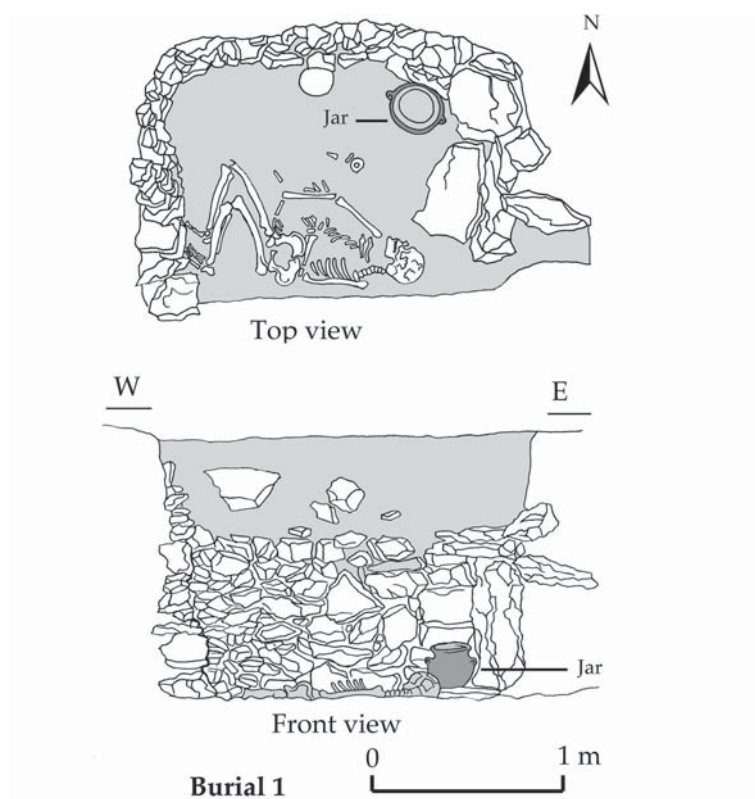


Fig. 12. Chobareti 2009, Burial 1.

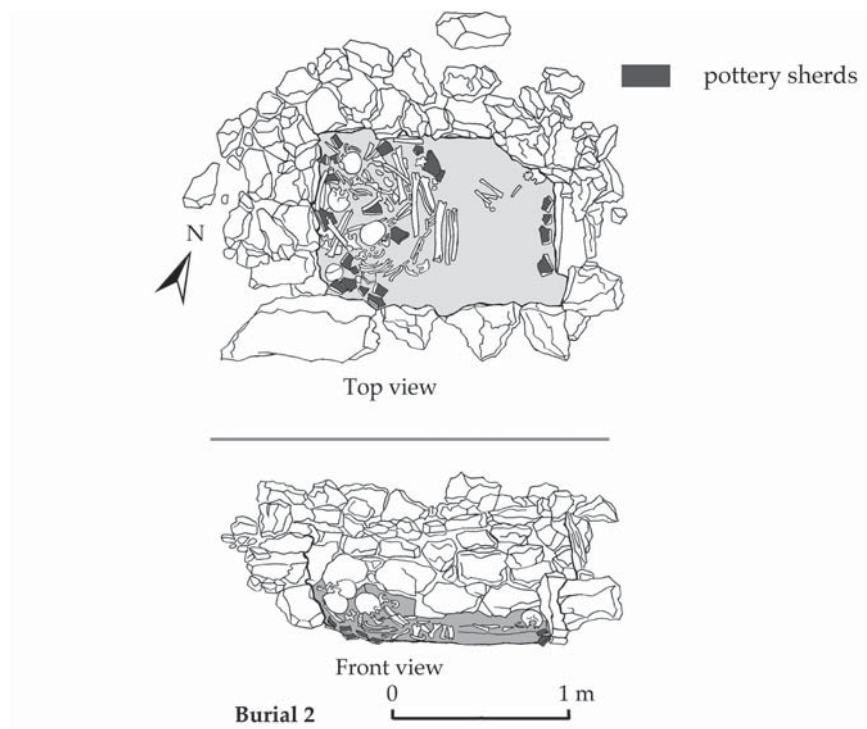


Fig. 13. Chobareti 2009, Burial 2.

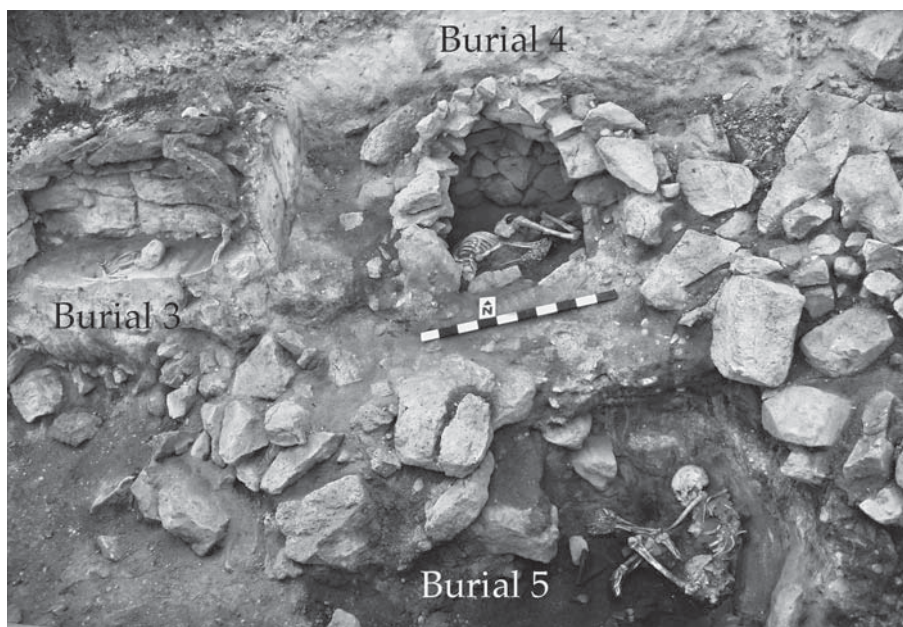
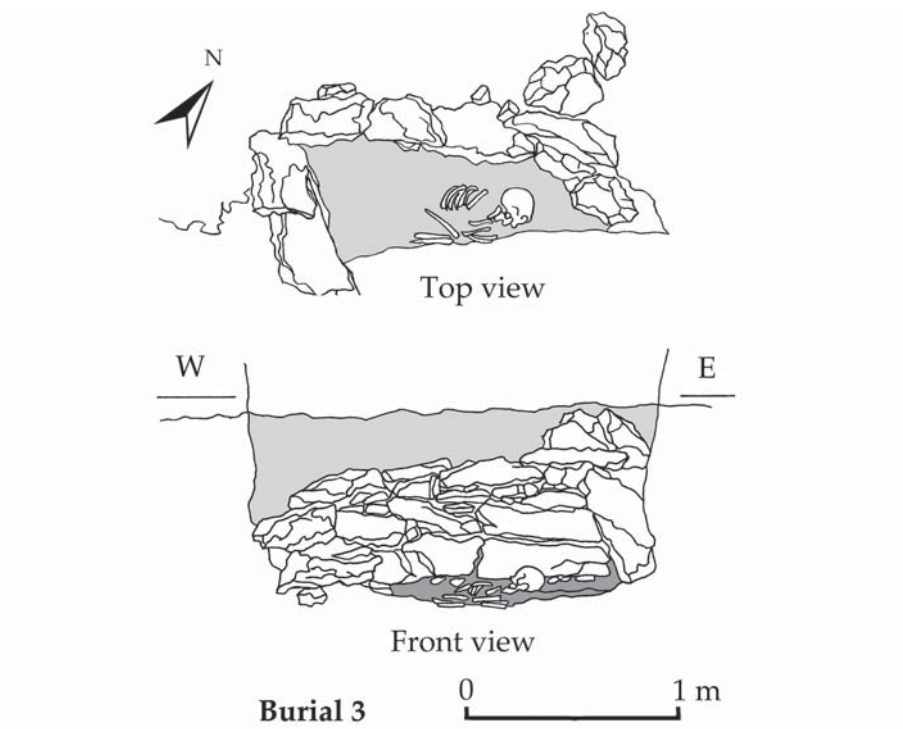


Fig. 14. Chobareti 2009, Burial 3.

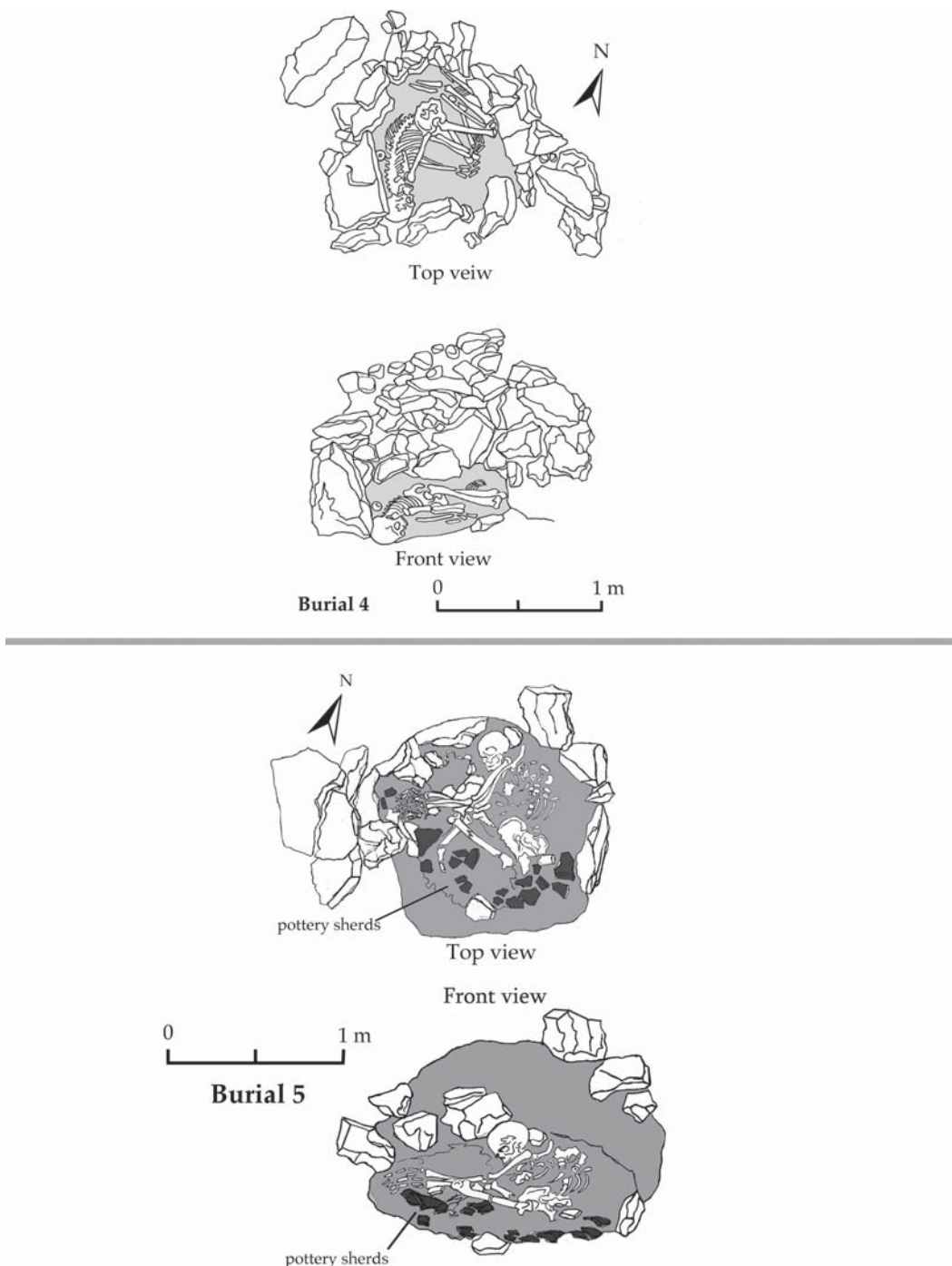


Fig. 15. Chobareti 2009, Burials 4 and 5.

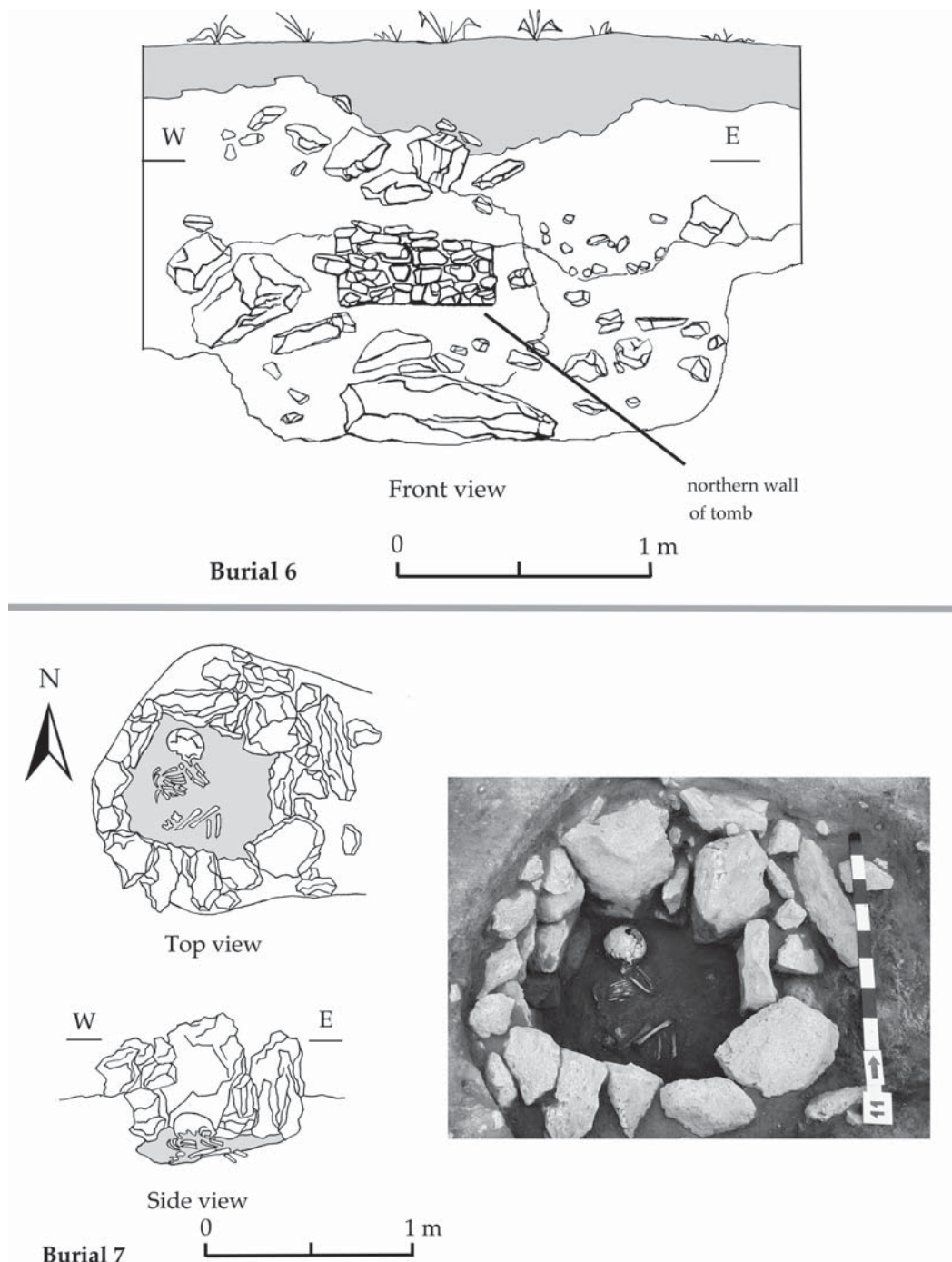


Fig. 16. Chobareti 2009, Burials 6 and 7.

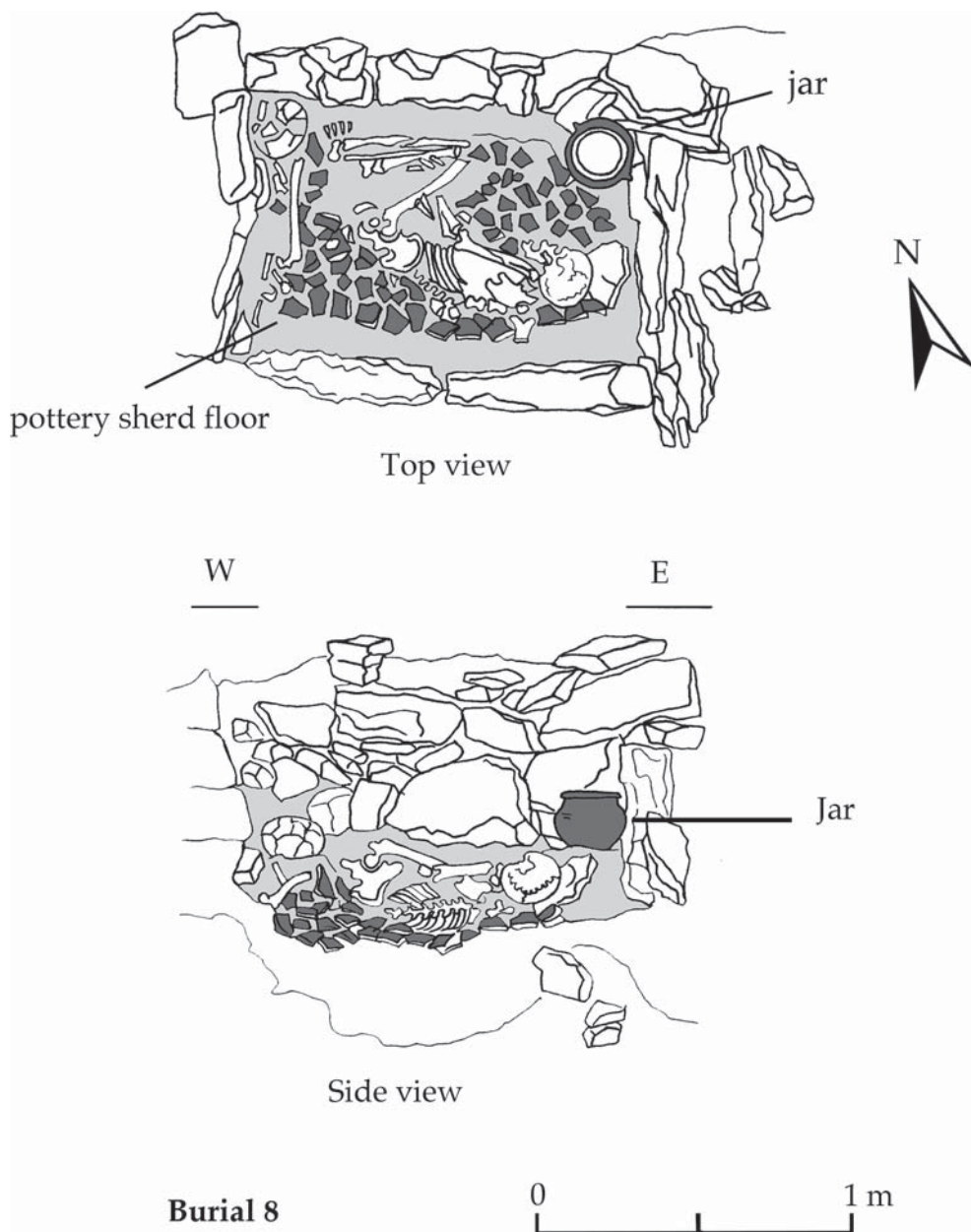


Fig. 17. Chobareti 2009, Burial 8 plan.

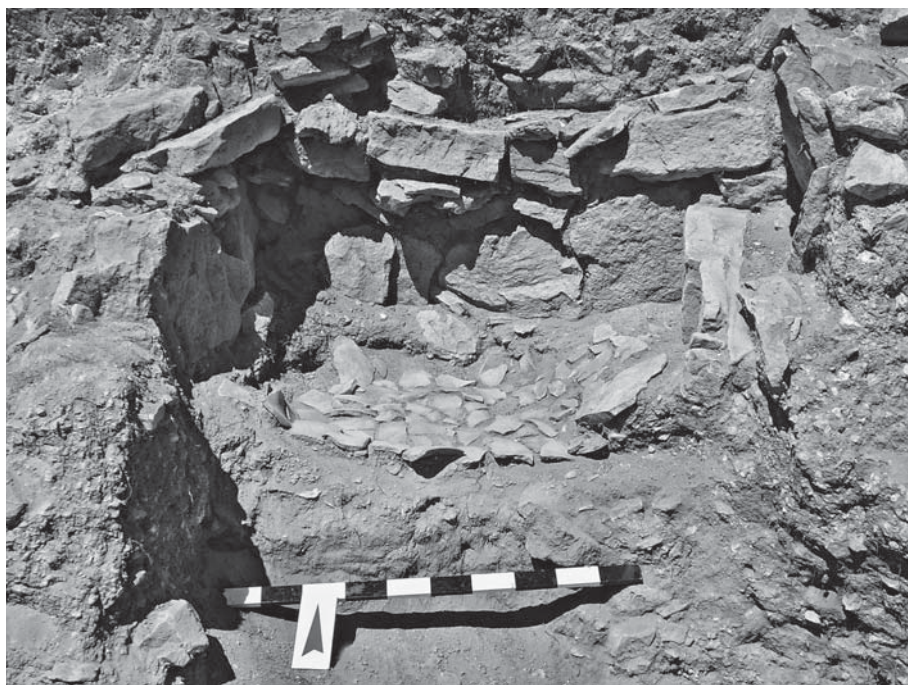


Fig. 18. Chobareti 2009, Burial 8.

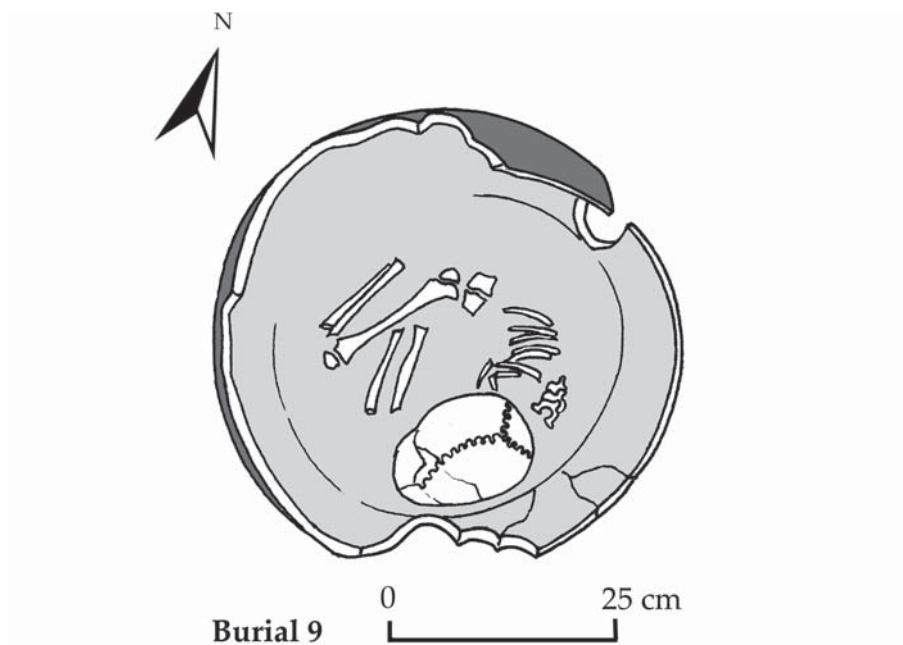


Fig. 19. Chobareti 2009, Burial 9.

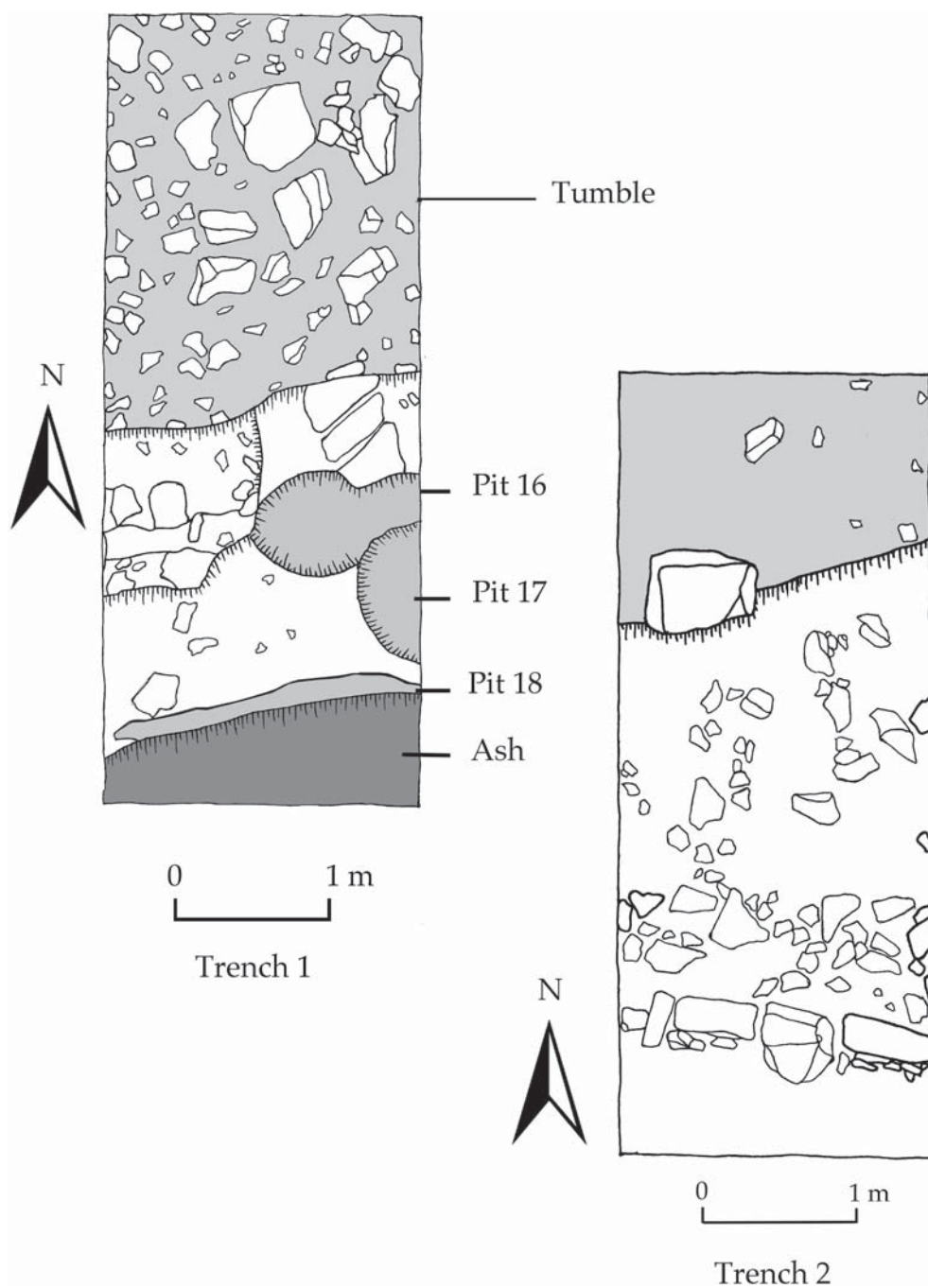


Fig. 20. Chobareti 2011, Trenches 1 and 2. Top views.

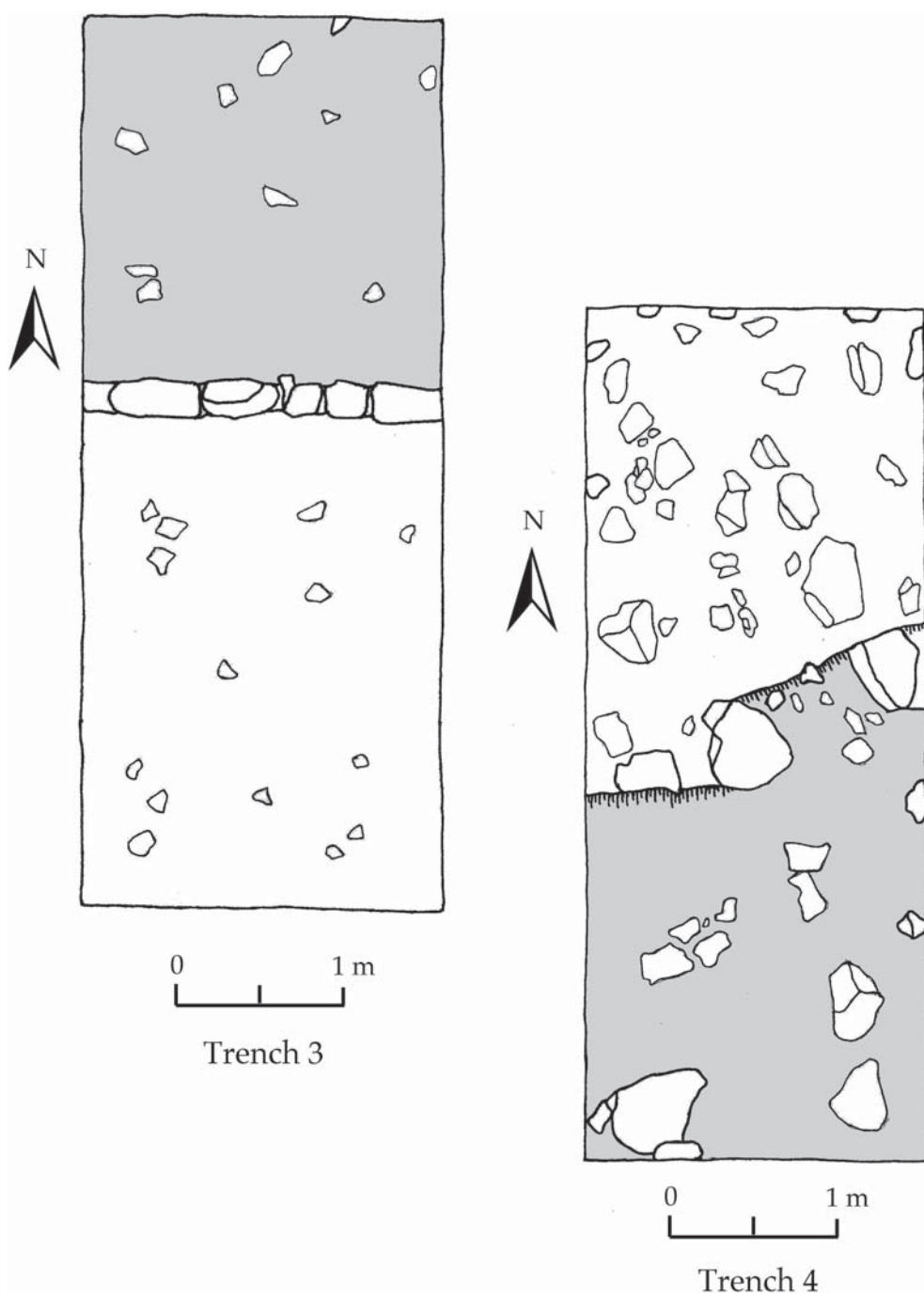


Fig. 21. Chobareti 2011, Trenches 3 and 4. Top views.

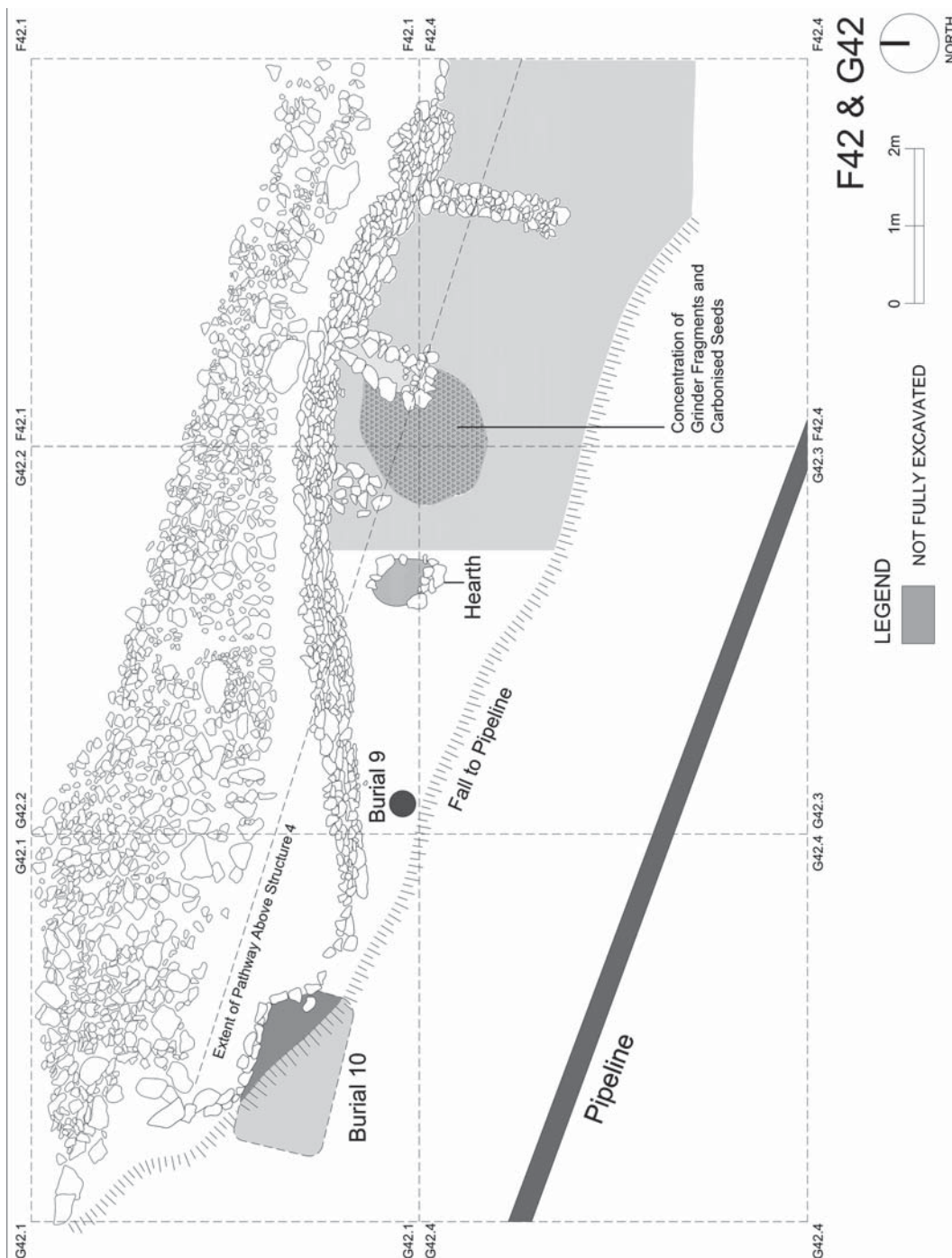


Fig. 22. Chobareti, Lower Operation, Structure 4. Plan (produced by Mia Huxson and Cliff Ogleby).



Fig. 23. Chobareti, Lower Operation, Structure 4.
1 Looking north; 2 Looking east.



Fig. 24. Chobareti, Lower Operation, Structure 4.

1 The north (rear) stone wall; 2 Burial 9 (a jar burial) with north wall in the background.

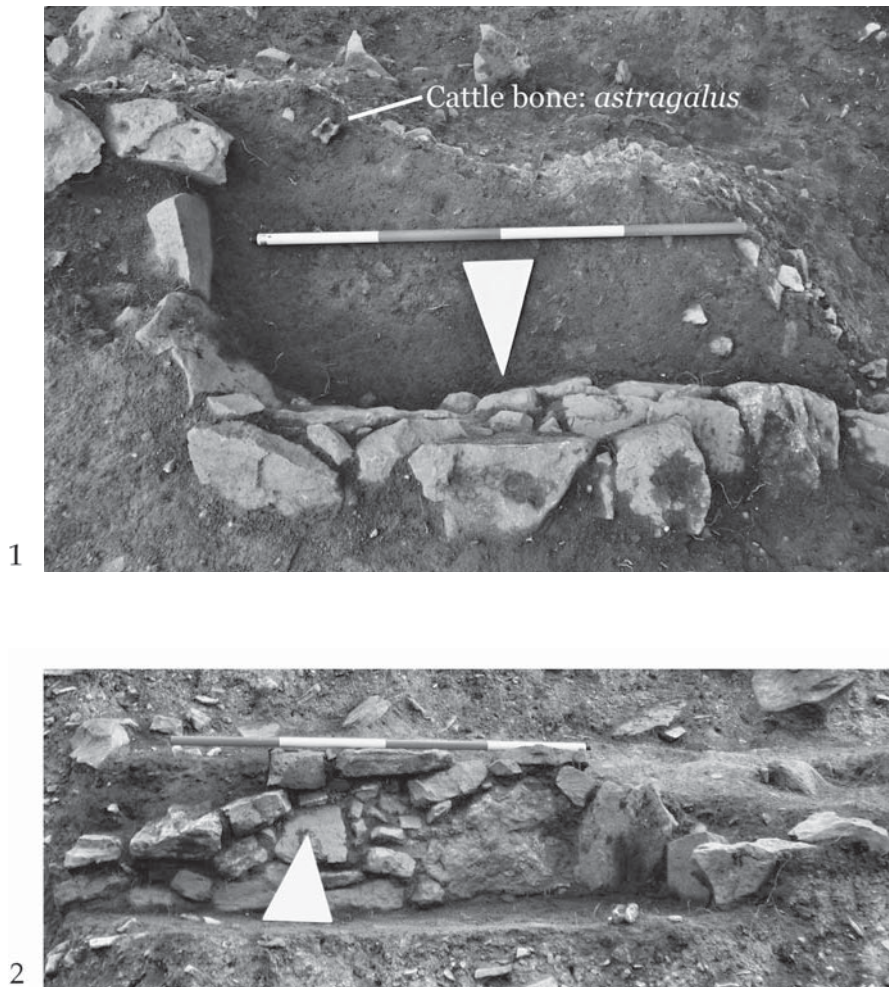


Fig. 25. Chobareti 2012, Lower Operation, Burial 10.
1 Top view; 2 Side view, looking north.

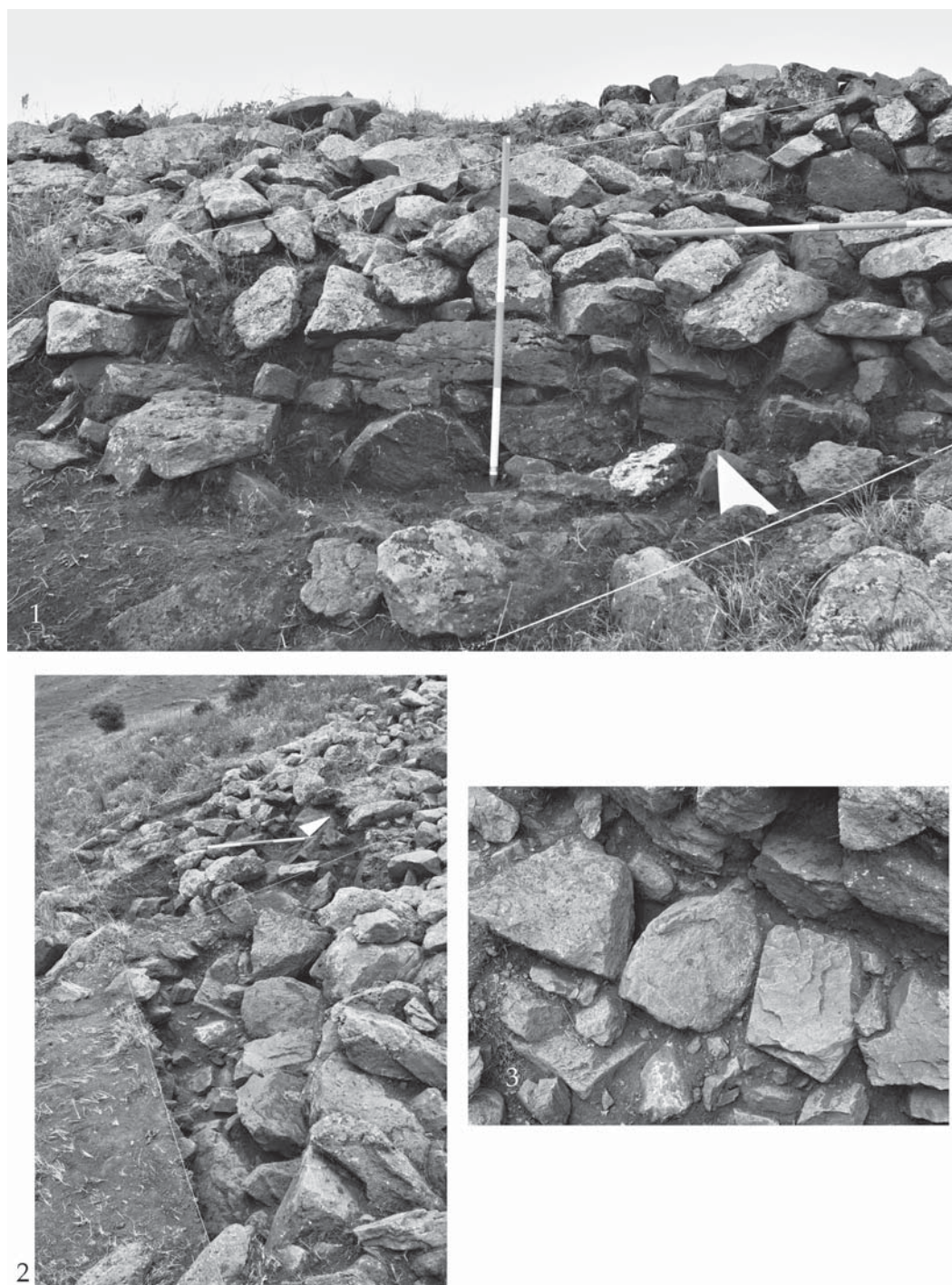


Fig. 26. Chobareti 2012, Upper Operation, Fortification wall.

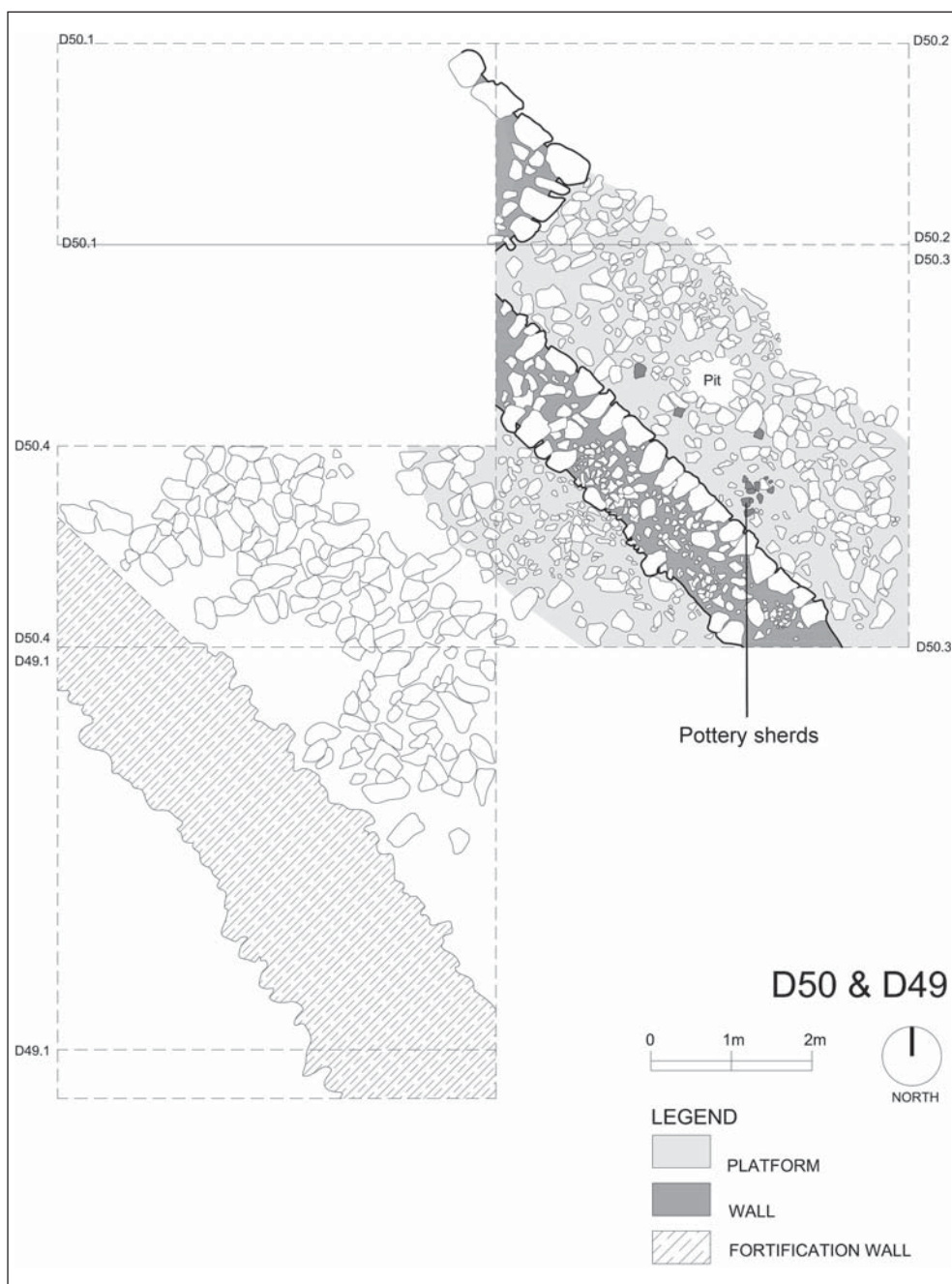


Fig. 27. Chobareti 2012, Upper Operation, Squares D49 and D50. Plan (produced by Mia Hutson and Cliff Ogleby).

Catalogue of Finds (Figures 28–51)

This Catalogue presents a selection of items from the three years of excavation. Following the general structure of this paper, the finds from the 2009 and 2011 excavations are presented first, followed by those found in 2012. In the interest of publishing the results so far as rapidly as possible, only the 2012 items are described in detail. A good number of the items found in 2009 and 2011 were recently moved to the refurbished Akhaltsikhe museum, which precluded their detailed study for the present purpose; their full description will be provided in the final report. However, all items included here have been drawn using standard conventions.

The following abbreviations are used in this Catalogue. Inv. no. (inventory number): Assigned to the 2009 and 2001 material; the first two digits (the year) are separated from the item number by a hyphen. SPF (Special Find Number): a unique number, used in 2012, comprising Locus number and sherd number separated by a forward slash. In the case of Structure 4, in Squares F42 and G42, the period between the 2011 and 2012 excavations witnessed a considerable amount of erosion, resulting in some sherds having no precise context. These sherds do not have a Locus number, but are assigned the Square number(s); for example, SPF G42.2/F42.1/1. HM: Hand-made; WM: Wheelmade; RD: Rim Diameter; BD: Base Diameter; D: Diameter; H: Height. All measurements are given in centimetres. Munsell colours were taken from *Munsell Soil Color*, 1992, revised edition, Munsell Color: New York. Where relevant, the contrasting colours of Kura-Araxes Ware are given; thus (Rd/Bl) refers to exterior (red) and interior (black) colour.

Figures

- 28 Structure 4 (2009 and 2011): §1, inv. no. 11–21; §2, inv. no. 09–214; §3, inv. no. 09–213; §4, inv. no. 11–22 — fragments of horseshoe-shaped andirons.
- 29 Structure 4 (2009 and 2011): §1, inv. no. 11–20, horseshoe-shaped andiron; §2, inv. no. 11–19 ceramic animal figurine; §3, inv. no. 09–203; §4, inv. no. 09–209; §5, inv. no. 09–205; §6, inv. no. 09–169; §7, inv. no. 09–173 — Kura-Araxes handle and rim fragments.
- 30 Structure 4 (2009): §1, inv. no. 09–175, Kura-Araxes rim fragment, black exterior, incised after firing; §2, inv. no. 09–182; §3, inv. no. 09–215. Structure 4 (2011): §4, inv. no. 11–33; §5, inv. no. 11–24; §6, inv. no. 11–10; §7, inv. no. 11–28 — Kura-Araxes fragments, two (§5 and 7) bearing applied decoration, and another (§3) possibly a stand.
- 31 Structure 4 (2011): §1, inv. no. 11–60, lid; §2, inv. no. 11–25; §3, inv. no. 11–27, body sherd with applied decoration. Burial 1: §4, inv. no. 09–291, Kura-Araxes jar; §5, inv. no. 09–292, bone spindle whorl. Burial 4: §6, inv. no. 09–295, bone spindle whorl. Burial 2: §7, inv. no. 09–293, ovoid-bodied Kura-Araxes jar.
- 32 Burial 2: §1, inv. no. 09–294; Burial 8 §2, inv. no. 09–298; §3, inv. no. 09–297; §4, inv. no. 09–296 — Kura-Araxes jars, one with impressed decoration on the shoulder.
- 33 Burial 9: §1, inv. no. 09–299. Out of context (2009): §2, inv. no. 09–230; §3, 09–275; §4, inv. no. 09–228; §5, 09–279; §6, inv. no. 09–278; §7, inv. no. 09–224.
- 34 Surface finds: §1, inv. no. 09–076; §2, inv. no. 09–283; §3, inv. no. 09–284 — basalt saddle querns.

- 35 Pit 1: §1, inv. no. 09-1; §2, inv. no. 09-2; §3, inv. no. 09-3; §4, inv. no. 09-5, single handled jar with incised hatched triangles pendant to the base of the neck; §5, inv. no. 09-4; §6, inv. no. 09-6; §7, inv. no. 09-35; §8, inv. no. 09-10; §9, inv. no. 09-21; §10, inv. no. 09-33; §11, inv. no. 09-25.
- 36 Pit 3: §1, inv. no. 09-44; §2, inv. no. 09-45, translucent grey obsidian projectile point; Pit 4: §3, inv. no. 09-82; §4, inv. no. 09-81; §5, inv. no. 09-84; §6, inv. no. 09-83; §7 inv. no. 09-80.
- 37 Pit 4: §1, inv. no. 09-48; §2, inv. no. 09-47; §3, inv. no. 09-46; §4, inv. no. 09-51; §5, inv. no. 09-70; §6, inv. no. 09-62; §7, inv. no. 09-52
- 38 Pit 4: §1, inv. no. 09-69, horse-shoe-shaped andiron; §2, inv. no. 09-79. §3, inv. no. 09-78, fragment of a large, circular hearth.
- 39 Pit 5: §1, inv. no. 09-85; §2 inv. no. 09-86, andiron fragment with incised decoration; §3, inv. no. 09-88; Pit 7, §4, inv. no. 09-92; §5, inv. no. 09-93; §5, inv. no. 09-90; §7, inv. no. 09-94; §8, 09-91; §9, inv. no. 09-105.
- 40 Pit 8: §1, inv. no. 09-109. Pit 11: §2, inv. no. 09-126; §3, inv. no. 09-117. Pit 12: §4, inv. no. 09-135. Pit 13: §5, inv. no. 09-136; §6, inv. no. 09-140. Pit 14: §7, inv. no. 09-143.

41 Chobareti 2012, Square G42/F42:

Kura-Araxes Ware

§1, inv. no. SPF 103/3 — Tall neck fragment from a thin-walled small pot; slightly flaring rim and rounded lip; **Kura-Araxes Medium Grey Brown** (Bl/Bl) ware; HM; grey to black 7.5YR 4/2 through section; well-levigated compact crisp clay, hard-fired (resonant when tapped); a moderate amount of fine gritty particles are in the paste; mottled and dark brown-black 7.5YR 5/2 slipped exterior; lightly burnished near the rim possibly use wear sheen; matt black slipped interior. RD *ca.* 11.

§2, inv. no. SPF G42.2/F42.1/6 — Fragment from a small pot; offset profile at juncture of shoulder and neck; flaring rim rising to remnant handle stump, once joined at the lower end on the shoulder; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; dark grey N4/ through core; medium-fine texture; a moderate amount of fine voids and mixed gritty inclusions in the paste; thick burnished 7.5YR 7/3-4 slip on the exterior and interior. RD *ca.* 11.

§3, inv. no. SPF G42.2/F42.1/5 — Tall-necked jar fragment with thin walls and rounded lip; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; fine to medium textured clay; even pale grey 7.5YR 6/4 through section; some voids, and fine mixed gritty inclusions in the paste; pale yellow brown 7.5YR 6/4-6/6 exterior and interior; burnished on both sides. RD 12.

§4, inv. no. SPF 100/5 — Large jar fragment with curved neck to the angular lip; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using coil technique; dark 10YR 3/1 core with a moderate amount of fine mixed gritty inclusions in the paste; burnished brown 7.5YR 6/4 slipped exterior with darker patches from firing or heat damage; matt, smoothed, mottled pale brown c.10YR 6/2 slipped interior. RD 30.

§5, inv. no. SPF 100/4 — Rim fragment from a medium-sized jar with a rounded lip and tall neck; **Kura-Araxes Medium Grey Brown** (Rd/Bl) ware; HM; the section is pale brown 7.5YR 6/6

on the exterior half and dark grey 7.5YR 2.5/1 toward the interior; medium-textured clay with very fine mixed gritty inclusions and a small amount of fine micaceous particles evenly distributed through the paste; matt exterior 10YR 6/3 surface; matt black 7.5YR 2.5/1 interior. RD 32

§6, inv. no. SPF 103/1 — Vertical neck fragment from a very large, thick-walled jar; slightly flaring rim with rounded lip; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using slab technique evident in compressed lamination seems in the section; grey N5/ core reddened 5YR 5/4 in the interior half of the section; medium textured clay with a moderate amount of fine gritty inclusions in the paste; breaks are sharp; pale brown 7.5YR 7/4 slipped, thoroughly burnished exterior; smoothed and plain, pale brown 7.5YR 7/4 interior; horizontal wipe marks are on the interior of the mouth. RD *ca.* 49.6.

§7, inv. no. SPF 103/13 — Fragment from a large jar with thickened and flat-topped rail rim; **Kura-Araxes Medium Grey Brown** (Rd/burnt possibly Rd) ware; HM, a void was formed through the thickest part of the rim during manufacturing; a moderate amount of small gritty particles in the dark 5YR 4/1 paste; thick and well-burnished, pale brown 7.5YR 6/3 slip on the rim and exterior; heat damaged and defaced 5YR 4/1 interior, once very smooth. RD *ca.* 38.4.

§8, inv. no. SPF 103/14 — Flaring rim from a pot with angular lip; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; compact and refined clay with occasional minute particle in the paste; hard fired and grey-brown 10YR 5/1 through section; breaks are sharp; burnished pale brown 10YR 6/4 exterior; smoothed, pale brown 10YR 7/3 interior. RD 20.

42 Chobareti 2012, Square G42/F42:

Kura-Araxes Ware

§1, inv. no. SPF 103/12 — Large jar fragment with flaring rim and thick walls; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; even grey 7.5YR 5/1–5/2 through section; hard, but friable clay with a ‘sandy’ medium fine texture throughout; breaks are sharp; a moderate of fine and occasional large mixed gritty inclusions in the paste; mid brown 7.5YR 7/2, lightly burnished exterior and interior. RD *ca.* 34.

§2, inv. no. SPF 103/2 — Body fragment from a closed tall-necked pot with sharply off-set profile at the juncture of shoulder and neck; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using coil technique; grey to pale brown 7.5YR 4/1 through section; hard-fired, but slightly friable breaks; a large amount of fine mixed gritty inclusions are in the paste; matt, pale brown 7.5YR 7/4 slipped exterior; smoothed self-slipped 5YR 6/6 interior. Dm at juncture of neck and shoulder *ca.* 23.

§3, inv. no. SPF 103/22 — Fragment from a deep pot with shallow groove at the off-set of the juncture of shoulder and neck; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; compact hard clay; medium coarse texture; grey 7.5YR 5/2 in the lower section and pale brown 7.5YR 7/6 in the upper part of the section; matt and smoke blackened exterior and interior; pale brown 7.5YR 7/4 surfaces; well burnished on upper neck and rim. RD *ca.* 30.

§4, inv. no. SPF G42.2/F42.1/1 — Large open bowl fragment; thickened rounded rim with remnant ledge-like knobs at the lip of the vessel; **Kura-Araxes Medium Grey Brown** (Rd/Bl) ware; HM, grey N3/ core; compact fabric with voids and fine to small largely dark gritty inclusions in

the paste; breaks are sharp; thick mottled and burnished 7.5YR 8/4 to 6/1 slip on the exterior; matt grey-brown N6/ interior. RD 24 at inner edge.

§5, inv. no. SPF 103/39 — Oblique rim and wall from an open bowl or wide off-set rim from a large pot with rounded lip and relatively thin walls for its size; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using coil technique evident in the slightly undulating surfaces; medium fine textured fabric, even red 5YR 6/6 through section and crisp (resonant when tapped); occasional fine mixed gritty inclusions in the paste; matt, smoke-blackened, pale 7.5YR 7/4 to dark brown exterior; matt, even pale brown 7.5YR 7/4 interior. RD c.40.

§6, inv. no. SPF 103/37 — Body fragment from a large, thick-walled pot, perhaps an open cooking pot form; the rim was probably flaring indicated by an off-set in the upper profile; large, flattened applied knob; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using coil technique evident from surface undulations and breaks along seem lines; grey core near the exterior, pale brown 7.5YR 7/4 near the interior; compact, hard-fired clay with a moderate amount of fine to small mixed gritty inclusions in the paste; breaks are moderately sharp; mottled thick, pale yellow-brown 7.5YR 7/4–6/4 burnished slip on the exterior; smoothed, pale brown 7.5YR 6/3 slipped interior. D of knob 3.8.

§7, inv. no. SPF 103/21 — Body fragment with applied, though decayed circular design; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; the core fired dark 7.5YR 4/1 near the exterior and pale brown 7.5YR 7/4 near the interior; compact and hard fired clay; some fine mixed inclusions in the paste; medium coarse breaks; thick pale brown 7.5YR 6/4 burnished exterior slip; smoothed and lightly burnished 7.5YR 7/4 interior.

§8, inv. no. G42.2/F42.1/1 — Well-made flattened knob with central, deep dimple broken from the wall of a large pot, possibly similar to SPF 103/37; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; grey-black 10YR 5/1 at the core; a moderate amount of fine to medium mixed gritty inclusions in the paste; pale brown ca. 10YR 6/3–6/4 slipped and burnished exterior; defaced on the interior. D of knob 3.4.

§9, inv. no. SPF 103/15 — Body fragment from a thick-walled, closed pot; **Kura-Araxes Medium Grey Brown** (Bl/Bl) ware; HM using coil technique (a coil exposed at the upper break and thick clay cover the coils on both sides); a moderate amount of mixed, fine gritty particles in the 7.5YR 5/6 paste; friable texture; breaks are eroded; streaky black to brown 7.5YR 6/4 burnished exterior; smoothed and poorly finished 7.5YR 4/3 interior.

43 Chobareti 2012, Square G42/F42

Kura-Araxes Ware

§1, inv. no. SPF 103/34 — Thin vertical pierced lug handle; the wall of the vessel is thin and probably from a closed small pot; **Kura-Araxes Refined** (Rd/Rd) ware; HM; well-levigated, compact clay; even reddish yellow 5YR 7/6 throughout; occasional fine voids in the paste; soft and eroding breaks; self-slipped surfaces.

§2, inv. no. SPF G42.2/F42.1/2 — Body fragment; **Kura-Araxes Medium Grey Brown** (Bl/Bl) ware; HM, formed around a cloth bag and exceptionally well-preserved cloth impression survive on the interior where the outer clay layer has flaked off; medium coarse textured black clay;

a moderate amount of fine to medium gritty inclusions; smoothed matt 7.5YR 6/1 exterior; black and flaking interior.

§3, inv. no. SPF G42.2/F42.1/7 — Base fragment possibly from a legged or fenestrated pot stand; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM likely using slab technique; coarse textured clay with small mixed gritty inclusions in the paste; poorly levigated clay; grey 7.5YR 5/1 through section; compact and hard-fired fabric with moderately sharp breaks; burnished black 5YR 7/3 exterior surface especially on the base. D of edge 20.

§4, inv. no. SPF 100/6 — Flat lid fragment with rounded edge; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; well levigated fabric; fine textured, hard fired clay with fine gritty inclusions in the paste; breaks are sharp; dark grey 2.5Y 3/1 core near upper surface and pale brown 7.5YR 6/6 in the lower section; slipped and very smoothed, finely finished surfaces, not burnished; 7.5YR 7/1–7/2 upper; 7.5YR 6/3 underside. RD *ca.* 31.

§5, inv. no. SPF 103/19 — One side of a portable hearth fragment, horse-shoe shape with flattened and burnished, but otherwise undecorated front; remnants of a ledge or attachment on the inner edge; the resting surface is flat and burnished; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; friable, coarse-textured clay; grey 5YR 4/2 at the core where thickest firing pale brown 5YR 7/4 near the surfaces; a moderate amount of fine to small mixed gritty inclusions in the paste, similar to other pottery from Chobareti; slipped pale pinkish-brown 5YR 5/4 surfaces. H of front 13.4, D of inner curve *ca.* 22.

§6, inv. no. SPF 103/27 — Undulating wall possibly from a shallow tray with small applied knob on the exterior; possibly an early form; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; even red 7.5YR 6/6 through section; a moderate amount of fine to small mixed gritty inclusions in the paste; thick and flaking, matt 7.5YR 6/4 slip on the exterior surface; matt smoothed 7.5YR 7/6 slipped interior.

§7, inv. no. SPF G42.2/F42.1/4 — Body fragment from a very thick-walled large pithos with traces of a deep groove near the top of the sherd; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM, laminations are evident in the section; grey *c.*10YR 4/1 core firing red near the surfaces; open, friable fabric with voids and fine to large mixed gritty inclusions in the paste; 7.5YR 8/4 slipped, smoothed and matt exterior; thick and flaking 7.5YR 7/3 slipped interior.

§8, inv. no. SPF G42.2/F42.1/3 — Body fragment from a large pot; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using slab technique with clear edge of the clay seam visible in the upper break; compact and heavy clay; dark grey N2.5/ at core firing brown 5YR 5/6 near the surfaces; slipped and smoothed red-brown 7.5YR 7/4 on the exterior; 5YR 7/4 on the slipped interior.

44 Chobareti 2012, Square G42/F42

Chaff-Faced Ware

§1, inv. no. SPF 103/16 — Rim fragment from a hole mouth jar; the flattened rim top angles obliquely into the vessel; **Pale Brown (chaff)**; HM; the section is divided in colour, pale brown 7.5YR 5/4 and grey 10YR 3/3; a small amount of fine, mixed gritty inclusions in the well-levigated paste; breaks are moderately sharp; roughly smoothed exterior; possibly straw-wiped interior; pale matt brown 10YR 7/3 slipped surfaces. RD *ca.* 24.

§2, inv. no. SPF 103/4 — Large hole mouth jar fragment; rounded lip and relatively thin walled; **Pale Brown (chaff)**; HM, likely using coil technique evident in the undulating surface; even pale reddish brown 7.5YR 6/6 through section; mottled 7.5YR 7/3 and darker on the exterior perhaps from use as a cooking pot; drab exterior and interior; smoothed pale brown 7.5YR 7/4 slipped interior. RD *ca.* 50.

§3, inv. no. SPF 103/5 — Rim fragment from an open bowl with rounded lip slightly angular at the outer edge and moderately thick walls; **Pale Brown (chaff)**; HM; medium textured clay, evenly coloured 7.5YR 6/6 through section; very fine mixed gritty particles in the paste; medium coarse breaks dulled from erosion; matt and smoothed, self-slipped 7.5YR 6/6 exterior and interior that have straw marks impressed into the surfaces. RD 24.

§4, inv. no. SPF 103/33 — Tray fragment with scooped open front, roughly smoothed around the opening and flattened resting surface; **Pale Brown (chaff)**; HM; occasional fine mixed gritty inclusions and some voids in the paste; hard textured clay even 5YR 7/4 coloured throughout; breaks are rough; chaff impressed base and walls. BD *ca.* 18.

§5, inv. no. SPF 103/6 — Two joining base fragment from a large jar with distinct chaff impressions on the resting surface and exterior wall; **Pale Brown (chaff)**; HM; even reddish yellow 10YR 7/6 through section; chaff and other voids, as well as some fine gritty particles in the paste; smoothed, matt, self-slipped 10YR 8/4 exterior and interior. BD *ca.* 54.

Yellow on Red ware from area G42/F42:

§6, inv. no. SPF 103/18 — Body fragment from a large, thick-walled jar; **Yellow on Red** ware; HM; friable clay, grey at the core firing red 5YR 6/8 with eroding dull breaks; medium coarse texture with some voids and a moderate amount of fine, mixed gritty inclusions in the paste; smoothed pale grey interior; thick, matt yellow 10YR 8/4 slip on the exterior; matt 2.5Y 8/2 slipped interior.

§7, inv. no. SPF 103/17 — Body fragment from a very thick-walled large jar; **Yellow on Red** ware; HM; very friable, reddish yellow 7.5YR 6/6 clay; eroding breaks; numerous chaff voids and a moderate amount of fine to small mixed gritty inclusions in the paste; thick, matt yellow slip paler than 5Y 8/2 on the exterior; smoothed and thickly self-slipped 7.5YR 6/6 interior, now eroded and flaking.

Hard Orange Drab ware:

§8, inv. no. SPF 103/7 — Base fragment with flat resting surface; **Hard Orange (drab)** ware; HM; very dark grey 5YR 5/1 through the core firing red 5YR 5/6 near the surfaces; hard fired clay; chaff voids and a moderate amount of fine to small mixed gritty inclusions in the paste; smoothed thinly self-slipped 5YR 7/4 exterior and interior. BD *ca.* 16.

§9, inv. no. SPF 103/8 — Base fragment with simple, flat resting surface; **Hard Orange (drab)** ware; HM; very dark 5YR 4/1 core firing red 5YR 6/8 for 2–3 mm near the surfaces; hard-fired, medium-coarse textured clay with moderately sharp breaks; some chaff voids in the paste; straw impressions on the 5YR 7/6 exterior surface with some smoke blackened patches; smoothed 5YR 7/6 interior.

Crisp Brickly (Sub-Category: Micaceous):

§10, inv. no. SPF 100/3 — Small bowl rim fragment with thickened lip; ridges and incised horizontal lines decorate the exterior; **Crisp Brickly (Micaceous)** ware; WM and thin-walled; pale red 5YR 6/6 through section and on the surfaces; the clay is peppered with very fine mixed particles and mica flecks; slurry finish on the interior. RD 14.

45 Chobareti 2012, Square L47:

Kura-Araxes Ware

§1, inv. no. SPF 201/4 — Deep pot fragment; flaring angular rim, abraded on the outer edge; thin-walled; **Kura-Araxes Medium Grey Brown (Rd/Rd)** ware; HM; compact, medium-textured N5/ clay with a moderate amount of fine mixed gritty inclusions in the paste; lightly burnished 7.5YR 7/3 slipped exterior; smoothed and matt slipped 5YR 7/4 interior. RD ca. 21.

§2, inv. no. SPF 200/2 — Curved neck and flaring angular rim fragment from a jar; **Kura-Araxes Medium Grey Brown (Rd/Rd)** ware; HM coil technique evident in the undulations in the section; hard fired, semi-coarse, grey N5/ clay with small to medium, mixed and angular gritty particles in the paste; breaks are shape; streaky, vertically burnished brown c.10YR 6/3 exterior; blackened patch near the rim; mottled, plain and smoothed c.10YR 7/4 and 4/1 interior. RD 24.

§3, inv. no. SPF 201/5 — Two joining, flaring rim fragments from a pot; **Kura-Araxes Medium Grey Brown (Rd/Rd)** ware; HM; half grey 2.5Y 5/1 core near exterior, half red 7.5YR 7/6 core near interior; compact, medium textured clay with a moderate amount of fine mixed gritty inclusions in the paste; pink-buff 7.5YR 7/4 and burnished exterior; smoothed slipped 7.5YR 7/2 interior. RD 24.

§4, inv. no. SPF 200/5. — Flaring rim from a large jar with rounded lip and indistinct groove on the outer edge; **Kura-Araxes Medium Grey Brown (Rd/Rd)** ware; HM using coil technique with undulations evident in the section; compact 5YR 5/4 fabric with a moderate amount of fine mixed gritty inclusions in the paste; breaks are moderately sharp; matt thickly slipped 5YR 7/4 exterior and 5YR 8/3 interior. RD 36.

§5, inv. no. SPF 200/7 — Bowl fragment with inward curving walls and rounded lip with sharply defined edge on the inner mouth; **Kura-Araxes Medium Grey Brown (Bl/Rd)** ware; HM using coil technique evident at the lower break; half black N3/ core near the exterior, half red 7.5YR 6/6 core near the interior; compact, well-levigated fabric; fine to small mixed gritty inclusions in the paste; breaks are sharp; black N2.5/ burnished exterior, now largely eroded; red 7.5YR 8/6–7/6 matt interior, on the lip and exterior. RD 24.

§6, inv. no. SPF 201/3 — Deep, open bowl fragment with thick curved walls and flatted lip; **Kura-Araxes Medium Grey Brown (Bl/Rd)** ware; HM; even brown 5YR 6/6 through section; medium coarse textured, compact clay; a medium amount of fine to small mixed gritty inclusions in the paste; once burnished N4/ slipped exterior, now eroded; streaky, red 5YR 7/4 burnished slipped interior. RD 28.

§7, inv. no. SPF 200/3 — Concave base fragment from an open bowl; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; dark grey N2.5/ at core firing brown 7.5YR 6/4 near the surfaces with very clear colour distinctions in the section; a medium amount of fine sandy grits in the paste; compact and well-levigated clay; hard-fired with sharp breaks; slipped pale brown 7.5YR 8/4–7/4 and burnished exterior; smooth 7.5YR 7/4 wash on the interior. BD 8.

§8, inv. no. SPF 201/2 — Very thin-walled flat base fragment from a small pot; well-worn resting surface; **Kura-Araxes Refined** (Bl/Bl) ware; HM; even mid-brown 2.5YR 4/2 through section; black N2.5Y/ burnished exterior; a finely scratched cross is on the exterior wall made post-firing; smoothed plain 10YR 5/1 interior with possible traces of residue. BD *ca.* 4.

§9, inv. no. SPF 200/4 — Body fragment with the stump of an angular handle; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; dark grey-black clay; medium textured clay with fine voids and mixed gritty inclusions in the paste; slipped pale brown on the exterior; an incised zigzag decoration made prior to firing is on the upper face; pale brown slipped interior; matt smoothed surfaces.

§10, inv. no. SPF 200/8 — Unusual shape, possibly the ridged edge fragment from a pedestalled base, a cylindrical pot stand or possibly a domed lid; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; grey 7.5YR 5/1 core firing red 7.5YR 7/3 near the surfaces; heavy clay with voids and fine mixed gritty inclusions in the paste; thin pink 7.5YR 7/6 slip on the outer surface; a similar slip may have coated the interior, now largely eroded. D of edge 37.

46 Chobareti 2012, Square L47:

Kura-Araxes Ware

§1, inv. no. SPF 201/1 — Flat lid fragment with shallow, irregular groove around the outer edge; heat damaged underside; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using slab technique; grey N4/ core firing brown 5YR 5/2 near the surfaces; hard-fired, compact fabric; a moderate amount of fine to small mixed gritty inclusions in the paste; breaks are moderately sharp and jagged; matt pinkish 7.5YR 8/3 slip on the upper surface; smoothed 5YR 6/3 underside. D of edge *ca.* 22.

Drab Brown Ware

§2, inv. no. SPF 103/4 — Slightly flaring rim from a small, thick-walled jar; **Drab Brown** ware; HM; very poor quality and friable, coarse-textured fabric with a large amount of voids through the paste; breaks are jagged; dark brown-black 10YR 2/1 through the section; roughly smoothed exterior and interior; eroded and encrusted 10YR 6/2–5/2 surface, once wet-smoothed. RD *ca.* 10.

Hard Red (Yellow Slip) Ware:

§3, inv. no. SPF 200/9 — Body fragment from a thick-walled vessel; **Hard Red-Yellow Slipped** ware; HM; the reddish yellow 5YR 6/6 clay matrix is peppered with a very large amount of fine to small sandy mixed gritty particles; friable and medium-textured fabric; thick yellow 2.5Y 8/3 and crazed slip on the exterior; traces of a reddish yellow thick slip on the interior.

§4, inv. no. SPF 200/6 — Hole mouth jar rim with slightly oblique and angular lip; decorative notches have been cut in the outer rim edge; **Hard Red-Yellow Slipped** ware; HM; the core is

red 2.5YR 6/4 near the interior and grey near the exterior; voids and fine to large mixed gritty inclusions in the paste; jagged breaks; matt, crazed and thick yellow 5Y 8/4 slip on the exterior and smoothed interior; a maroon 7.5R 5/1 wash on the interior is also on the rim and on the exterior wall for some two centimetres where it is 7.5YR 5/1 thin and fugitive. RD 22.

Kura Araxes Ware, Square N49.1:

§5, inv. no. SPF 301/2 — Open bowl fragment with flattened rim top and two small knobs are on the rim; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM; compact clay, grey 7.5YR 5/1 through section firing reddish yellow 7.5YR 6/2 near the surfaces; hard-fired; a moderate amount of voids and fine to small mixed gritty inclusions in the paste (not micaceous); eroding pale brown 7.5YR 6/4 slip on the interior and exterior. RD 18.

§6, inv. no. SPF 301/1 — Vertical loop handle from a large jar; ovoid section; **Kura-Araxes Medium Grey Brown** (Rd/Rd) ware; HM using coil technique evident in section; grey 7.5YR 4/1 through core; hard fired clay; jagged breaks; voids and a moderate amount of mixed gritty inclusions in the paste; thick pale brown 7.5YR 7/4, matt slip on the exterior; 7.5YR 7/4–6/4 interior.

Crisp Brickly (Sub-Category: Micaceous) Ware, Square D49–D50:

§7, inv. no. SPF 401/15 — Flaring rim fragment from a wide-necked jar; a fingernail-impressed pie-crust design decorates the outer rim edge; **Crisp Brickly (Micaceous)** ware; WM and throwing ridges on the interior; very fine to small mixed gritty particles in the brown 5YR 5/4 paste; brown 5YR 5/4 to black, smoothed and matt slip on the exterior and interior; blackened and heat damaged near the rim. RD 22.

§8, inv. no. SPF 401/14 — Fragment from a jar with slight lip formed on the inner mouth and angular edges on the lip; **Crisp Brickly (Micaceous)** ware; WM; slightly grey at the core firing brown 5YR 6/4 near the surfaces; compact, hard-fired clay; fine mixed gritty and micaceous particles in the paste; breaks are sharp; slipped and smoothed 5YR 4/1 surfaces; smoke blackened patches. RD 24.

§9, inv. no. SPF 401/26 — Thickened and everted rim from a large open vessel with two poorly formed grooves on the top; **Crisp Brickly (Micaceous)** ware; WM and lightly striated interior; heavily micaceous clay, even brown 7.5YR 5/4 through section; a moderate amount of fine to small mixed gritty inclusions in the paste; smoke blackened on the outer edge; matt brown 7.5YR 6/4 exterior; matt, brown slipped 7.5YR 6/3–5/3 interior surface. RD 28.

§10, inv. no. SPF 401/25 — Body fragment from a closed jar with relatively thin walls (two other fragments have been identified); **Crisp Brickly (Micaceous)** ware; likely HM using coil technique; a moderate amount of very fine mica in the 5YR 5/3 paste, voids and fine to large gritty inclusions; medium textured; deeply incised linear and possibly zigzag decoration made while the clay was wet; grey-brown 7.5YR 6/3 slipped exterior; roughly smoothed plain red 5YR 6/4 interior.

§11, inv. no. SPF 401/12 — Ornately decorated shoulder fragment from a pitcher or large jar; **Crisp Brickly (Micaceous)** ware; WM; brown 5YR 5/6 through section; hard-fired, medium coarse texture; fine to small mixed gritty inclusions in the paste with a moderate amount of very fine golden micaceous particles; smoothed and slipped 7.5YR 6/2 exterior; the interior was wiped horizontally on

the upper section and vertically on the lower; the exterior incised decoration made while the clay was wet forms horizontal zones; in the upper register are deep punctures, below is a shallow grooved, wavy line and in the lower zone is an applied ridge on clay with impressions resembling plaited rope.

47 Chobareti 2012, Square D49–D50:

Crisp Bricky (Sub-Category: Micaceous)

§1, inv. no. SPF 401/8 — Body fragment from a large pithos decorated with applied finger-impressed ridges of clay imitating rope designs below which the body is heavily wiped (with cloth?) in a rusticated decorative all over design; **Crisp Bricky (Micaceous)** ware; WM; medium-textured, compact and hard 10YR 6/3 clay; a large amount of very fine mica and fine mixed gritty inclusions in the paste, breaks are eroding; slipped and matt surfaces, 5YR 6/4 on the exterior, 5YR 7/4 on the interior; numerous fragments of this vessel have been recovered.

§2, inv. no. SPF 401/10 — Body fragment from a large thin-walled jar with combed and single line decoration on the exterior; **Crisp Bricky (Micaceous)** ware; WM; medium coarse clay; slightly greyer 7.5YR 5/3 at the core firing red near the surfaces; similar to other large pithoi fragments found at the site; a moderate amount of fine mixed gritty and micaceous particles in the paste; slipped and pale brown 7.5YR 6/6 exterior; plain smoothed and gritty 7.5YR 5/3 interior.

§3, inv. no. SPF 401/7 — Body fragment from a large pithos (other fragments from the same vessel have been found); **Crisp Bricky (Micaceous)** ware; WM; slightly pale grey 5YR 6/3 at the core firing red-brown near the surfaces; medium coarse clay with very fine to small mixed gritty and micaceous inclusions in the paste; eroding breaks; thin 5YR 6/6–5/6 wash on the exterior in refined, but similar clay to the matrix; the exterior is decorated in rustic fashion with haphazardly (cloth?) wiped, oblique striated lines in zones above and below a horizontal wiped band; plain smoothed 5YR 4/6–6/6 interior.

§4, inv. no. SPF 401/9 — Body fragment from a large pithos with applied ridge and cloth wiped lower exterior wall as a decorative feature; **Crisp Bricky (Micaceous)** ware; WM with throwing lines running obliquely up the length of the wall interior; even dark brown 2.5YR 5/8 clay; golden mica flecks, very fine to small black and crystalline particles in the paste and surfaces; 7.5YR 6/6 exterior; 10YR 5/2 interior.

§5, inv. no. SPF 401/20 — Ovoid sectioned handle from a large and thin-walled vessel; a flattened round pellet of clay decorates the top; **Crisp Bricky (Micaceous)** ware; WM; micaceous fabric fired 5YR 6/6 nearest the exterior and 7.5YR 6/4 toward the interior in the section; matt, self-slipped surfaces; the interior has numerous finger impressions where the handle was joined.

§6, inv. no. SPF 401/13 — Handle from a very large, narrow-necked pithos or pitcher; decorated with finger-impressed (with fingernail impression) dimple at the top and bottom and grooves at the sides; ovoid section; **Crisp Bricky (Micaceous)** ware; WM body fragment; grey 7.5YR 5/1 at core; golden mica flecks, some voids and mixed gritty inclusions in the paste; red-brown 7.5YR 7/6 slipped and smoothed surfaces.

§7, inv. no. SPF 401/21 — Four fragments from a jar or jug; **Crisp Brickly (Micaceous)** ware; WM; micaceous fabric, grey 7.5YR 5/1 at the core firing brown 7.5YR 5/6 near the surfaces; fine to large mixed gritty inclusions in the paste; breaks are sharp; medium coarse textured and hard fired clay; matt and smoothed exterior with thin 7.5YR 5/3 wash; applied horizontal band with repeated, deep and sharply impressed design; 7.5YR 6/4–5/4 interior.

§8, inv. no. SPF 401/24 — High ring base fragment, possibly from an open bowl; **Crisp Brickly (Micaceous)** ware; slow WM or hand modelled; dark brown 10YR 5/1 core firing 5YR 5/6 red; coarse fabric with small to large mixed gritty inclusions in the paste; smoothed and slipped 2.5YR 6/6 exterior; roughly finished underside; smoothed and slipped 2.5YR 6/6 interior. BD *ca.* 8.

48 Chobareti 2012, D49–D50:

Crisp Brickly (Sub-Category: Micaceous)

§1, inv. no. SPF 401/17 — Base fragment with irregular resting surface and relatively thin walls; **Crisp Brickly (Micaceous)** ware; WM; dark 10YR 4/1 through the section; hard-fired and moderately well-levigated, medium coarse fabric with fine to small mixed gritty particles in the paste; breaks are sharp; smoothed thin 10YR 6/3 to 2.5YR 6/6 patchy wash on the exterior; rougher on the plain 10YR 6/2 and 5YR 6/6 interior. BD 10.

§2, inv. no. SPF 401/27 — Base fragment with a shallow and irregularly formed ring at the edge of the otherwise flat and smoothed resting surface; **Crisp Brickly (Micaceous)** ware; WM; dark grey 10YR 5/2–4/2 core firing pale brown near the exterior surface; a few voids and a small amount of fine mixed gritty particles and a large amount of minute micaceous flecks are in the paste; smoothed 5YR 6/6 exterior; very dark 5YR 5/4, matt and self-slipped interior. BD 12.

§3, inv. no. SPF 401/16 — Base fragment with thin walls and flat and roughly finished resting surface; **Crisp Brickly (Micaceous)** ware; WM and striated interior; medium-coarse textured, dark 7.5YR 4/1 fabric; fine micaceous and fine to small mixed gritty particles in the paste; slipped and roughly smoothed. Mottled 7.5YR 6/4–5/2 exterior with some gritty inclusions breaking at the surface; 7.5YR 6/4 interior. BD 14.

§4, inv. no. SPF 401/19 — Base fragment from a large jar with flat resting surface and vertically shaved where the outer edge was neatened while the clay was wet; **Crisp Brickly (Micaceous)** ware; WM; grey 7.5YR 6/6 core firing brown near the surfaces; micaceous fabric with voids and a moderate amount of fine mixed gritty inclusions in the paste; rough throwing ridges remain on the base and outer wall; self-slipped 7.5YR 6/4 exterior and 7.5YR 6/6–5/6 interior with blackened patches. BD *ca.* 13.

Crisp Brickly (Sub-Category: Red Slip), Square D49–D50:

§5, inv. no. SPF 401/4 — Body fragment from a closed pot, possibly a cooking vessel with two deep horizontal grooves on the shoulder; **Crisp Brickly (Red Slipped)** ware; WM; hard-fired and medium-coarse textured fabric, grey N3/ through section; golden mica in the paste; breaks are sharp; brown 5YR 5/6 and smoke blackened exterior; red 10R 4/8 painted decoration in rustic fashion; matt brown 5YR 6/4 slipped interior. D max *ca.* 16.

§6, inv. no. SPF 401/5 — Body fragment from a pot; **Crisp Bricky (Red Slipped)** ware; slow WM or possibly hand-made (surfaces have eroded); medium-coarse textured 10YR 4/1 clay with very fine to fine mixed gritty inclusions and a moderate amount of mica flecks in the paste; the exterior has a matt, patchy red 10R 5/6 slip that only partly covers the underlying surface; signs of use-wear sheen on the exterior; horizontal wavy and straight lines made prior to firing decorated the exterior; smoothed 5YR 6/4 slipped interior.

§7, inv. no. SPF 401/28 — Body fragment from a large jar with stump of an ovoid-sectioned handle decorated with irregular thin groove and wider thumb impressed depression; **Crisp Bricky (Red Slipped)** ware; hand-modelled; grey 5YR 5/4 core; compact and hard-fired clay; breaks are sharp; a moderate amount of fine to small mixed gritty inclusions levigate the micaceous paste; thick, smoothed brown 5YR 5/6 slip on the exterior with traces of a thin red wash; flaked and eroded interior surface, originally smoothed and 7.5YR 5/4 self-slipped.

§8, inv. no. SPF 401/18 — Bowl fragment; slightly everted rim sloping obliquely into the bowl, thin lip; **Crisp Bricky (Red Slipped)** ware; WM; dark 5YR 5/1 at the core firing red near the surfaces; medium textured clay, poorly levigated; a small amount of mixed fine gritty inclusions in the paste; smoothed yellowish red 5YR 5/4 interior and exterior; thin red 10R 4/4 wash on the exterior. RD 11.2.

Heavy Dark Ware, Square D49–D50:

§9, inv. no. SPF 401/29 — Base fragment from a jar; **Heavy Dark** ware; HM using slab technique evident in seem near the resting surface; micaceous 7.5YR 5/2 paste with fine to small mixed gritty inclusions in the paste; hard and heavy, ‘stone-ware’ fabric; very irregular surface, especially near the base on the exterior; dark 7.5YR 5/3 matt, thin wash on exterior; slipped and smoothed, matt brown-grey 7.5YR 6/4 interior. BD 9.

Eroding Light Red Ware, Square D49–D50:

§10, inv. no. SPF 401/31 — Body fragment; **Eroding Light Red** ware; likely WM and thin-walled; soft and eroding clay; even reddish-yellow 7.5YR 7/6 through section; very fine, sandy texture; dull and eroded breaks; occasional mica flecks, voids and a moderate amount of fine mixed gritty inclusions in the paste; matt thin yellow 7.5YR 8/6–7/6 wash on the exterior; plain unslipped interior.

Brown Black (Grey Slipped) Ware, Square B48:

§11, inv. no. SPF B48/2 — Hole mouth jar fragment; off-set thickened and slightly irregular rim with rounded lip and outer edge; horizontal ridges and grooves on the shoulder; **Brown Black (Grey Slipped)** ware; WM; hard stone ware; fine wheel striations on the interior; brown 10YR 5/2 fabric near interior, grey N6/ near exterior; a moderate amount of very fine to large gritty inclusions in the paste; moderate levigation with some elongated and compressed voids evident in the fabric; burnished on rim and streaky burnished around 10YR 5/2 on lower exterior wall; smoothed 2.5Y 5/1 interior. RD 24.

Crisp Bricky Ware, Square B48:

§12, inv. no. SPF B48/1 — Rim fragment from a thick-walled large jar decorated with incised herringbone pattern on the flat rim top; **Crisp Bricky (Reddish Brown)** ware; HM using coil

technique; coarse textured clay with voids corresponding to coil seems and undulating surfaces; even red 5YR 6/4 through core; small to medium mixed gritty inclusions in the paste; thin 7.5YR 7/6 wash on the surfaces. RD 44.

49 Chobareti 2012, Sqaure B48:

Crisp Bricky Ware

§1, inv. no. SPF 500/9 — Rim fragment from a large and thick-walled hole mouth jar; **Crisp Bricky (Reddish Brown)** ware; WM; even red 7.5YR 6/6 through section; poorly levigated, coarse and friable texture; many voids and a large amount of fine to small gritty inclusions in the paste; thin yellowish 10YR 7/4 slip on the exterior and paler 2.5Y 8/2 interior, smoothed but not burnished. RD *ca.* 34.

§2, inv. no. SPF 500/8 — Flat lid or baking tray; **Crisp Bricky (Reddish Brown)** ware; HM; very friable and decayed fabric; grey 5YR 6/6/ at the core firing brown near the surfaces; small to large gritty inclusions in the paste; remnants of finger impressed decoration at the edge; remnant decayed poor 5YR 4/1 slip survives on the flattened resting surface. D at edge 16.

§3, inv. no. SPF 500/10 — Base fragment from a jar with smoothed resting surface; **Crisp Bricky (Reddish Brown)** ware; HM likely using coil technique evident in undulating surface and seam voids in section; irregularly fired dark grey to pale red 10YR 6/1–5/1 core; poorly levigated and coarse texture clay; small to large mixed gritty inclusions; breaks are jagged; roughly smoothed, mottled and irregular 10YR 6/3 exterior; rougher 7.5YR 7/4 interior; possible residue coats the interior. BD 20.

Crisp Bricky Ware (Sub-Category: Micaceous)

§4, inv. no. SPF 501/2 — Body fragment from a closed jar; **Crisp Bricky (Micaceous)** ware; WM and rilled exterior surface (a decorative effect); even mid-brown 7.5YR 6/4 through section; hard, medium-coarse textured clay; a moderate amount of golden mica flecks, voids and very fine mixed gritty particles in the paste; matt surfaces; largely eroded 7.5YR 5/4 interior, once smoothed.

§5, inv. no. SPF 500/11 — Small lid (or possibly a cup) with hollow top and conical shape; **Crisp Bricky (Micaceous)** ware; likely HM; coarse micaceous clay with voids and small to large mixed gritty inclusions in the paste; medium coarse breaks; hard-fired clay; dark through the core; yellow slipped exterior and interior. D of top 3; H 3; D of outer edge 8.

§6, inv. no. SPF 500/1 — Jar rim with a small ridge at the lip and the semblance of a lid gallery on the inner mouth; **Crisp Bricky (Micaceous)** ware; WM and even red-brown 5YR 6/6 through section with striated interior, smoothed exterior; incised lines on the ridge under the rim mimics rope design; self-slipped 5YR 6/6 exterior. RD 20.

§7, inv. no. SPF 500/2 — Roughly flat base from a jar; **Crisp Bricky (Micaceous)** ware; WM; coarse dark N3/ fabric with voids, micaceous flecks and fine to small mixed gritty inclusions in the paste; hard-fired; moderately sharp breaks; mottled grey 7.5YR 6/1 to red 5YR 6/6 plain and smoothed exterior; smoothed interior with banding due to kiln conditions, pale 7.5YR 6/3 near the top, 7.5YR 5/2 near the bottom. BD 10.

§8, inv. no. SPF 504/1 — Flaring rim from a jar with use wear abraded line on the outer edge of the rim; **Crisp Bricky (Micaceous)** ware; WM; very fine sandy texture; micaceous clay with minute fine gritty inclusions in the paste; very dark grey 7.5Yr 3/1 core firing brown 7.5YR 5/4–5/6 at the surfaces; smoothed plain surfaces. RD 22.

§9, inv. no. SPF 500/12 — Disc base fragment with flat resting surface and rounded outer edge; **Crisp Bricky (Micaceous)** ware; WM and lightly striated exterior; dark grey-brown 2.5Y 4/1 clay firing brown near the surfaces; eroding dull breaks; fine mica flecks and fine to very large gritty inclusions through the coarse-textured paste; smoothed 2.5YR 6/6 self-slipped surfaces. BD 7.

§10, inv. no. SPF 501/1 — Bowl with curved wall; the rim has a distinct groove in the inner lip; post-firing shallow and irregular grooves under the rim; **Crisp Bricky (Micaceous)** ware; slow WM; compact 10YR 3/1 clay; breaks are sharp; fine to small mixed gritty inclusions in the paste including green crystalline particles and a large amount of very fine mica flecks; smoothed 10YR 3/1 exterior; smoothed 10YR 4/2 interior with use-wear burnishing on the lower wall. RD 18.

§11, inv. no. SPF 500/13 — Base fragment from a pot with smoothed resting surface; **Crisp Bricky (Micaceous)** ware; HM likely using coil technique with voids evident along seam lines; partly pale grey 10YR 7/1 through core; a moderate amount of fine mixed gritty inclusions in the paste; surfaces are blackened 5YR 3/1 mottled from use as a cooking pot; red 5YR 6/4 in patches on the exterior. BD 10.

Crisp Bricky Ware (Sub-Category: Burnished)

§12, inv. no. SPF 500/14 — Flaring rim fragment from a thin-walled jar; **Crisp Bricky (Burnished)** ware; likely WM; pale grey-brown 5YR 5/2 core firing reddish yellow 5YR 6/6 near the surfaces; fine, sandy textured clay; a large amount of very fine mixed gritty inclusions in the paste; the very smooth exterior has a slightly lustrous burnished 5YR 6/6 surface and unusual pale greyish wash; self-slipped, 5YR 6/6 matt interior surface peppered with very fine gritty particles. RD 18.

§13, inv. no. SPF 500/3 — Body fragment from a large jar; **Crisp Bricky (Burnished)** ware; HM using coil technique evident in the section and in the slightly undulating walls; medium textured clay with voids and minute to small, mixed gritty particles in the paste; grey 7.5YR 5/1 at the core firing pale brown near the surfaces; a large amount of fine micaceous particles in the paste; slipped and burnished 7.5YR 6/4 surfaces.

§14, inv. no. SPF 502/2 — Body fragment; **Crisp Bricky (Burnished)** ware; HM; even reddish yellow 7.5YR 6/4–6/6 through section, darkening toward the interior; breaks are sharp; compact and hard fired clay; voids and a moderate amount of fine mixed gritty inclusions in the paste; matt yellow 10YR 7/2 slipped exterior with horizontal burnished band decoration and oblique combed pattern; defaced interior surface.

§15, inv. no. SPF 500/4 — Body fragment probably from a large jar; **Crisp Bricky (Burnished)** ware; WM and finely rilled c.10YR 6/3 interior; compact and hard fired clay; even grey 10YR 3/1 through section; breaks are sharp; a small amount of fine mixed gritty inclusions are in the paste — the clay is lightly micaceous; matt thinly washed c.10YR 6/2 exterior; two wide bands remain of the pattern burnished decoration; two fine incised lines might also be decorative.

50 Chobareti 2012, Square B48:

Heavy Dark Ware

§1, inv. no. SPF 502/3 — Body fragment from a jar; **Heavy Dark** ware; HM; even mod brown 7.5YR 3/1 through section firing dark grey to black near the surfaces; a moderate amount of small mixed gritty inclusions in the paste; slipped and compact surfaces; vertical streaky burnished exterior, mottled green grey 5Y 7/1 to dark grey 5Y 3/1; matt and crazed pale grey 10YR 7/2 slip on the interior.

Crisp Bricky Ware (Sub-Category: Red Slip):

§2, inv. no. SPF 501/4 — Flaring and distorted rim, possibly from a vessel with a pinched spout; **Crisp Bricky (Red Slipped)** ware; WM; medium-fine textured and hard-fired, grey-brown 7.5YR3/1 clay; a moderate amount of minute to fine gritty particles in the paste; breaks are sharp; smoothed exterior with a thin weak red (slightly purplish) 10YR 5/4 wash on the exterior; thin, pale brown 7.5YR 6/6 to dark slip on the interior.

§3, inv. no. SPF 501/3 — Bowl or jar fragment with flaring rim and relatively thin walls; **Crisp Bricky (Red Slipped)** ware; WM with fine striation especially on the interior; medium coarse textured clay; micaceous clay with voids and a moderate amount of mixed fine gritty inclusions in the paste; grey 7.5YR 5/1 through section; breaks are sharp; very thin red 2.5YR 6/6 slip on the exterior and interior. RD 20.

Crisp Bricky Ware (Sub-Category: Yellow Slip):

§4, inv. no. SPF 502/1 — Near vertical rim from a small jar with flattened lip top; **Crisp Bricky (Yellow Slipped)** ware; likely slow wheel made; lightly micaceous clay with a moderate amount of fine mixed gritty inclusions in the paste; even red 2.5YR 5/6 through section; friable texture; thick yellow 7.5YR 7/4 matt slip on the exterior and interior. RD 14.

Heavy Dark Ware

§5, inv. no. SPF 500/7 — Closed jar fragment with near vertical rim and rounded lip; **Heavy Dark** ware; HM likely coil technique with undulations in the wall and evident in the section; compact, coarse clay, even brown 7.5YR 4/1 through section; mica fleck are in the surfaces; matt, mottled pale brown to grey 10YR 6/2–5/3 exterior; streaky burnished 10YR 5/1 to 7.5YR 6/3 interior. RD 20. 2012,

Artefacts: §6, Square B48 (Art. 29) red flint blade; §7, Square L47.4 (Art. 15) black obsidian tool; §8, Square B48.4 (Art. 30) red flint blade; §9, Square D50.3 (Art. 13) black obsidian tool; §10, Square F42.1 (Art. 31) black obsidian blade; §11, Square N 49.1 (Art. 7) red flint point; §12, Square N49.1 (Art. 4.1) black obsidian tool; §13, Square L47.4 (Art. 11) black obsidian tool; §14, Surface find (Art. 3) pottery bead; §15, Square D50.2 (Art. 5) gilt silver belt buckle; §16, Square D50.1 (Art. 20) glass beaker rim; §17, South of G42.2/42/1 (Art. 1) pottery sherd re-worked into a disc; §18, Square L47.4 (Art. 2) pottery sherd re-worked into a disc; §19, Square D50.2 (Art. 25) pottery sherd re-worked into a disc and unfinished conical drill holes on both sides; §20, Square B 48 (Art. 28) basalt pestle.

51 Chobareti 2012, artefacts: §1, Square D50.3 (Art. 17) basalt hammer stone; §2, Square F42.4 (Art. 32) two red basalt fragments used as upper and lower grinding stones.

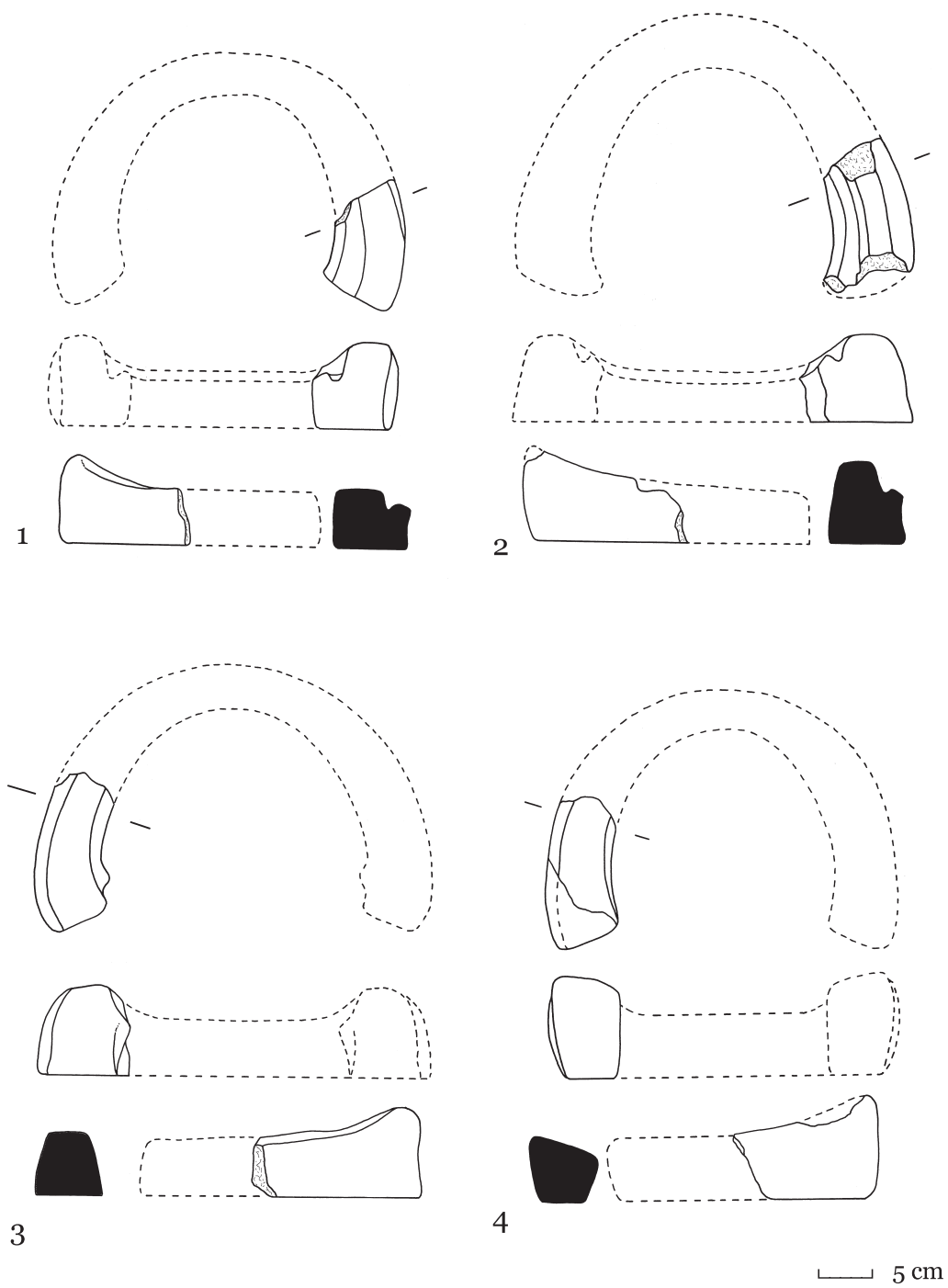


Fig. 28. Structure 4, andiron fragments.

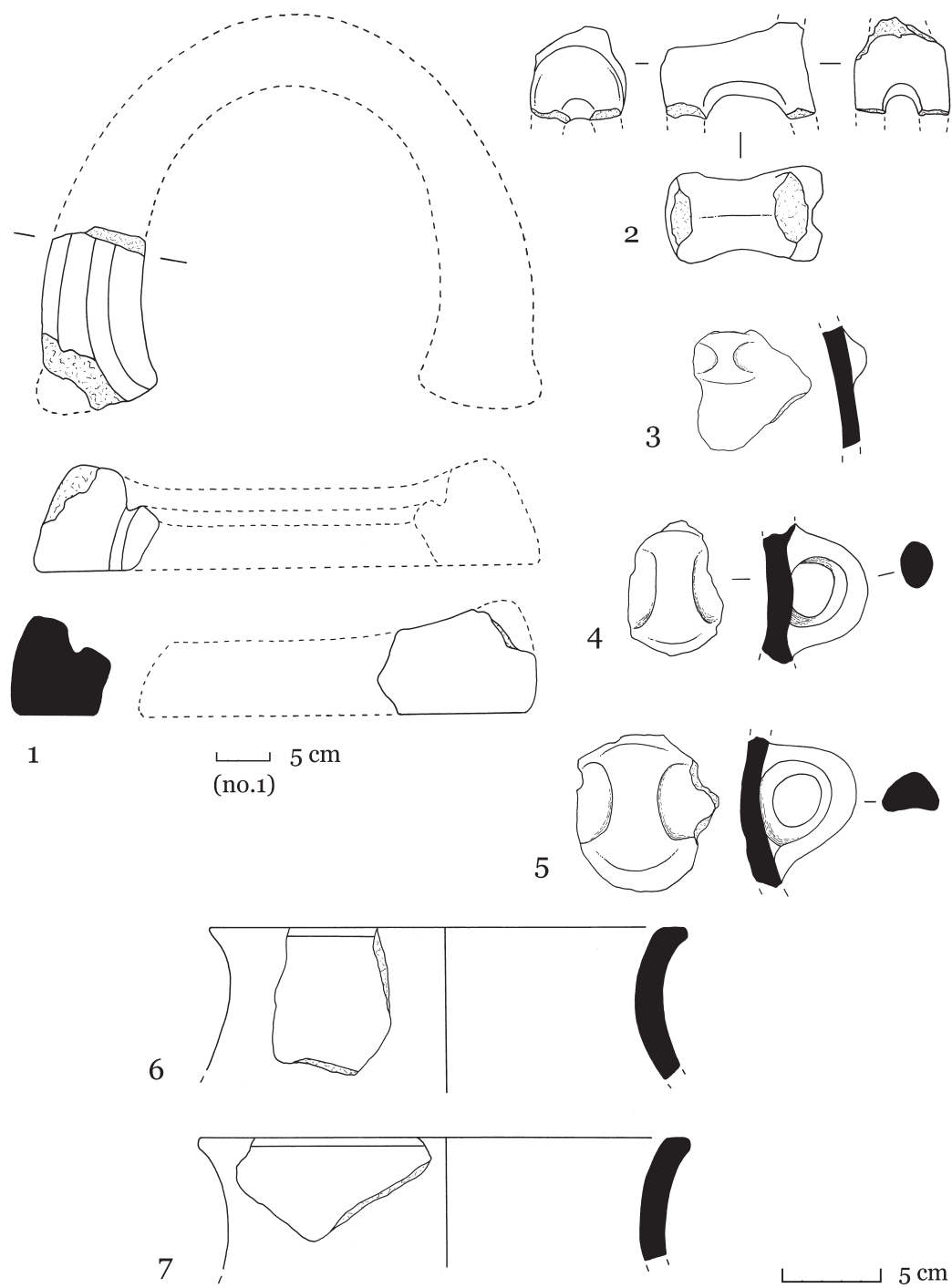


Fig. 29. Structure 4, 1 andiron fragment; 2 terracotta animal figurine; 3-7 pottery.

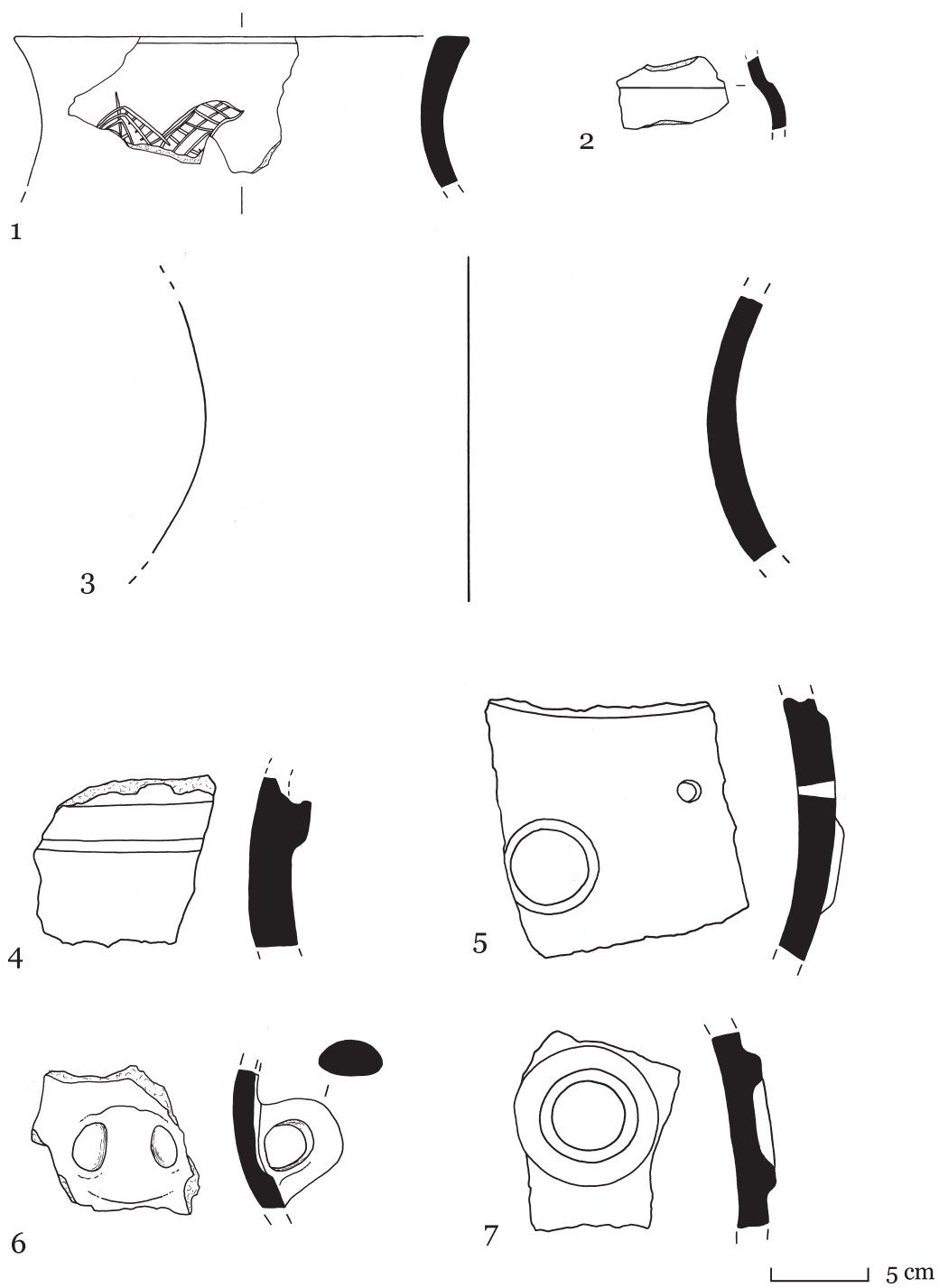


Fig. 30. 1-7, Structure 4.

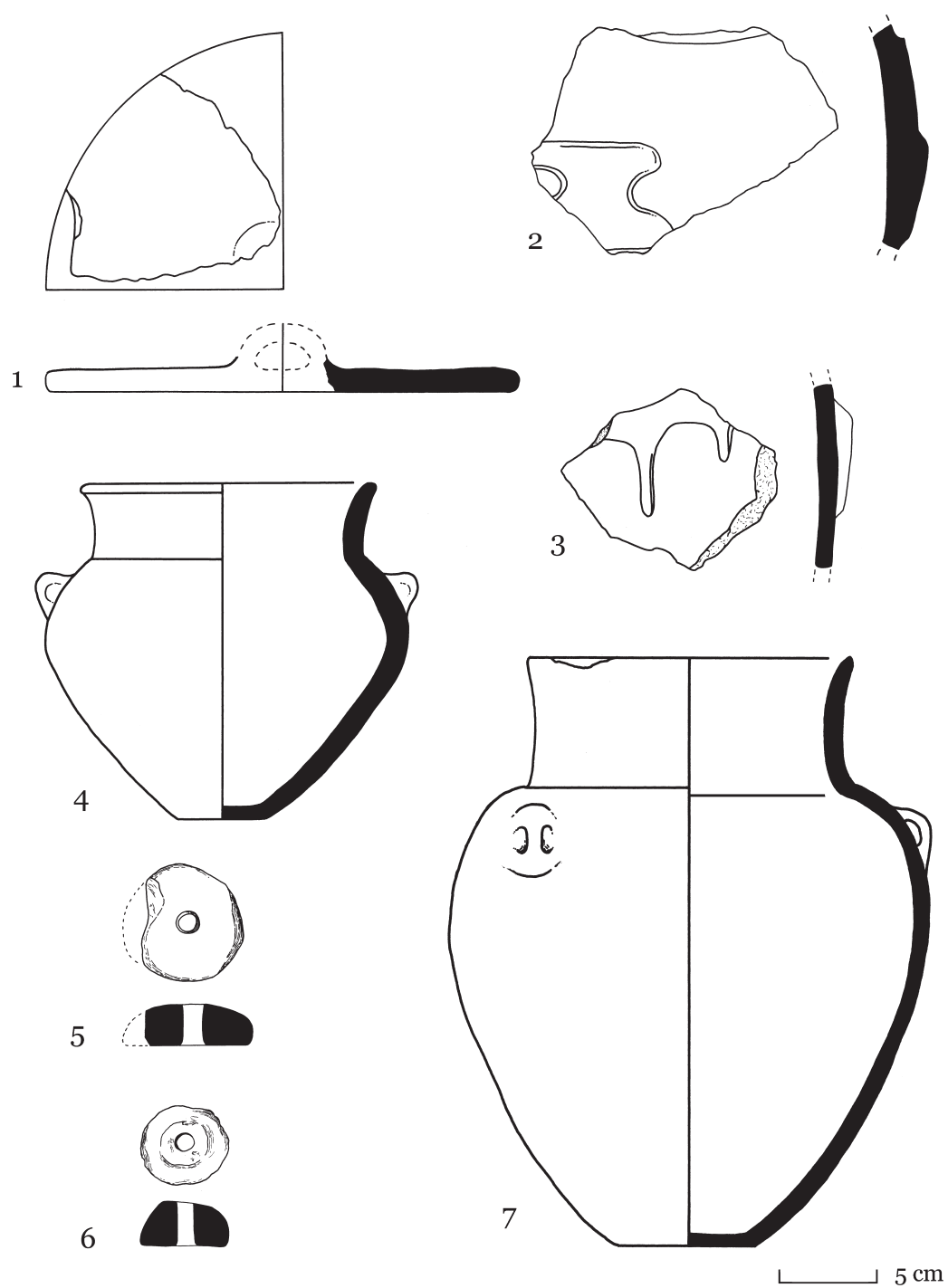


Fig. 31. 1-3, Structure 4; 4-5, Burial 1; 6, Burial 4; 7, Burial 2.

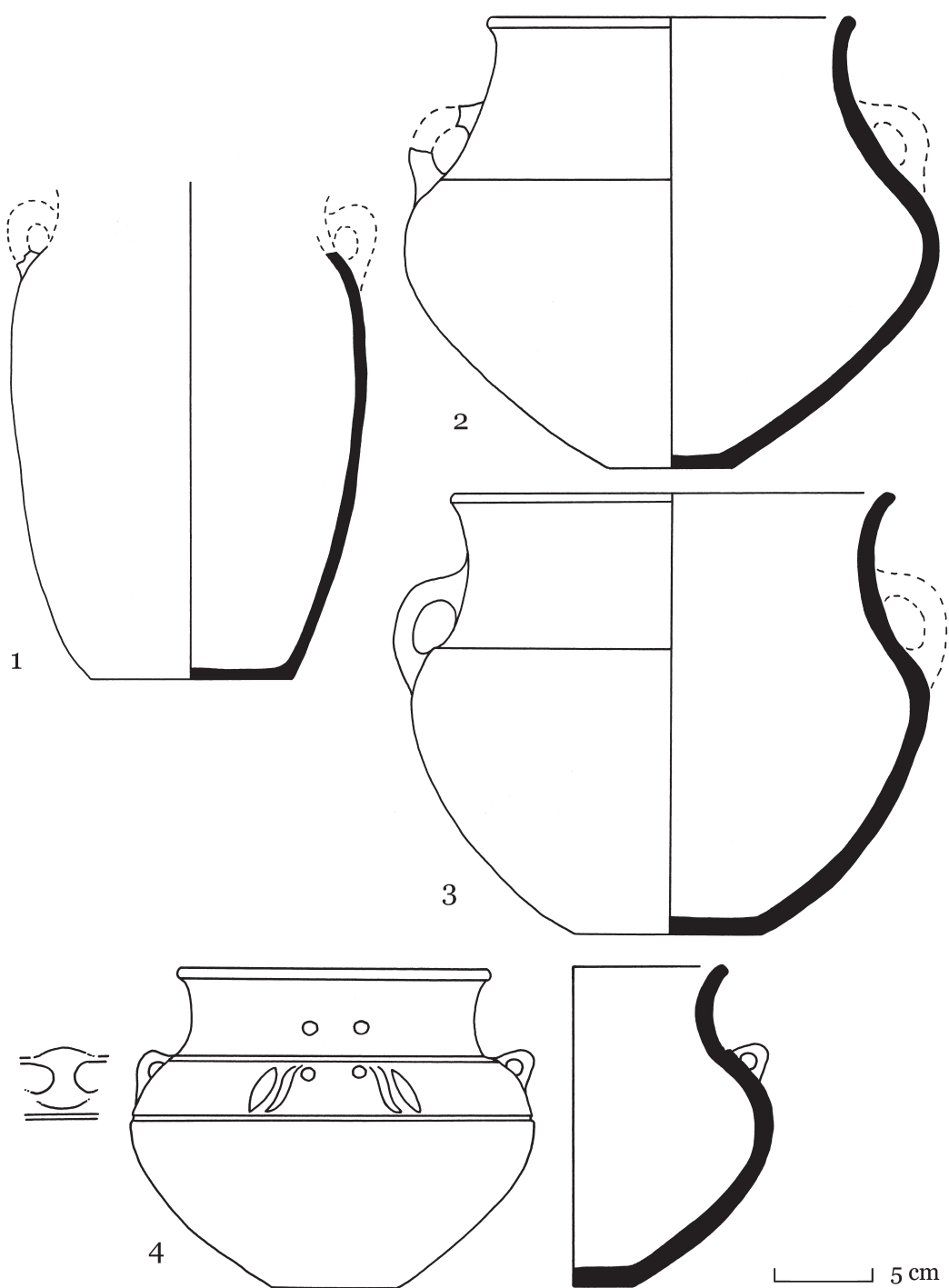


Fig. 32. 1, Burial 2; 2–4, Burial 8.

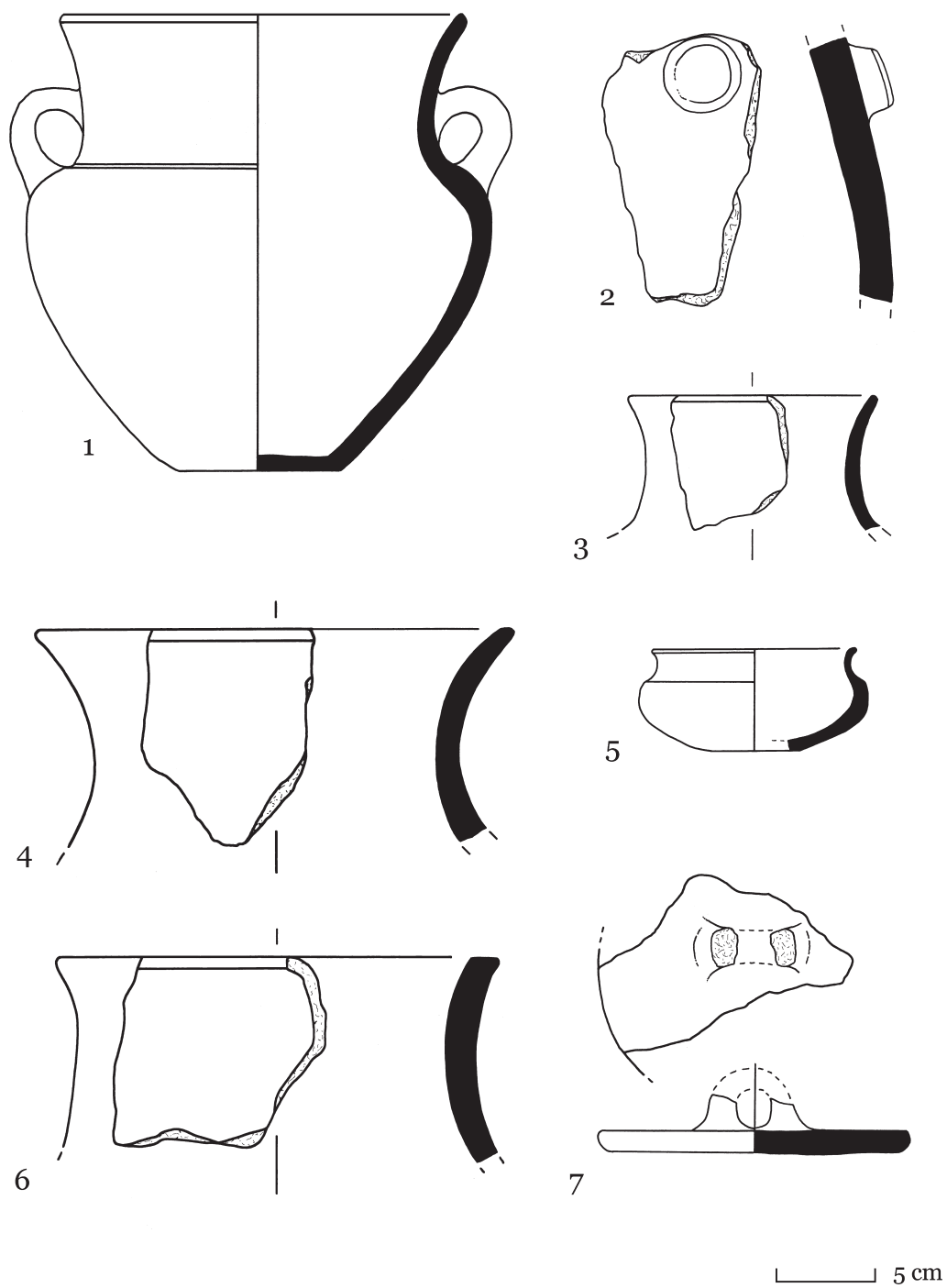
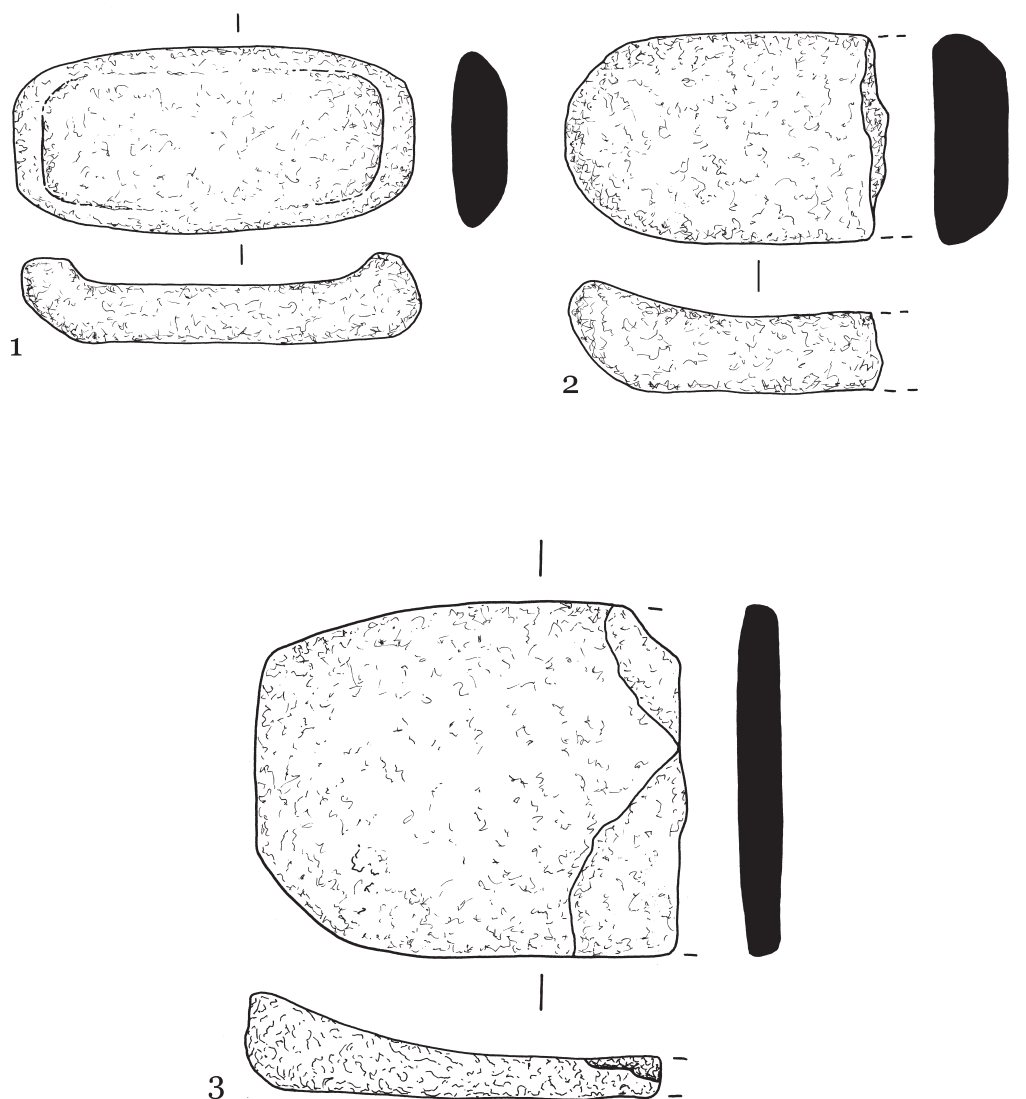


Fig. 33. 1, Burial 9, 2–7, out of context (2009).



5 cm

Fig. 34. Surface finds, stone grinders.

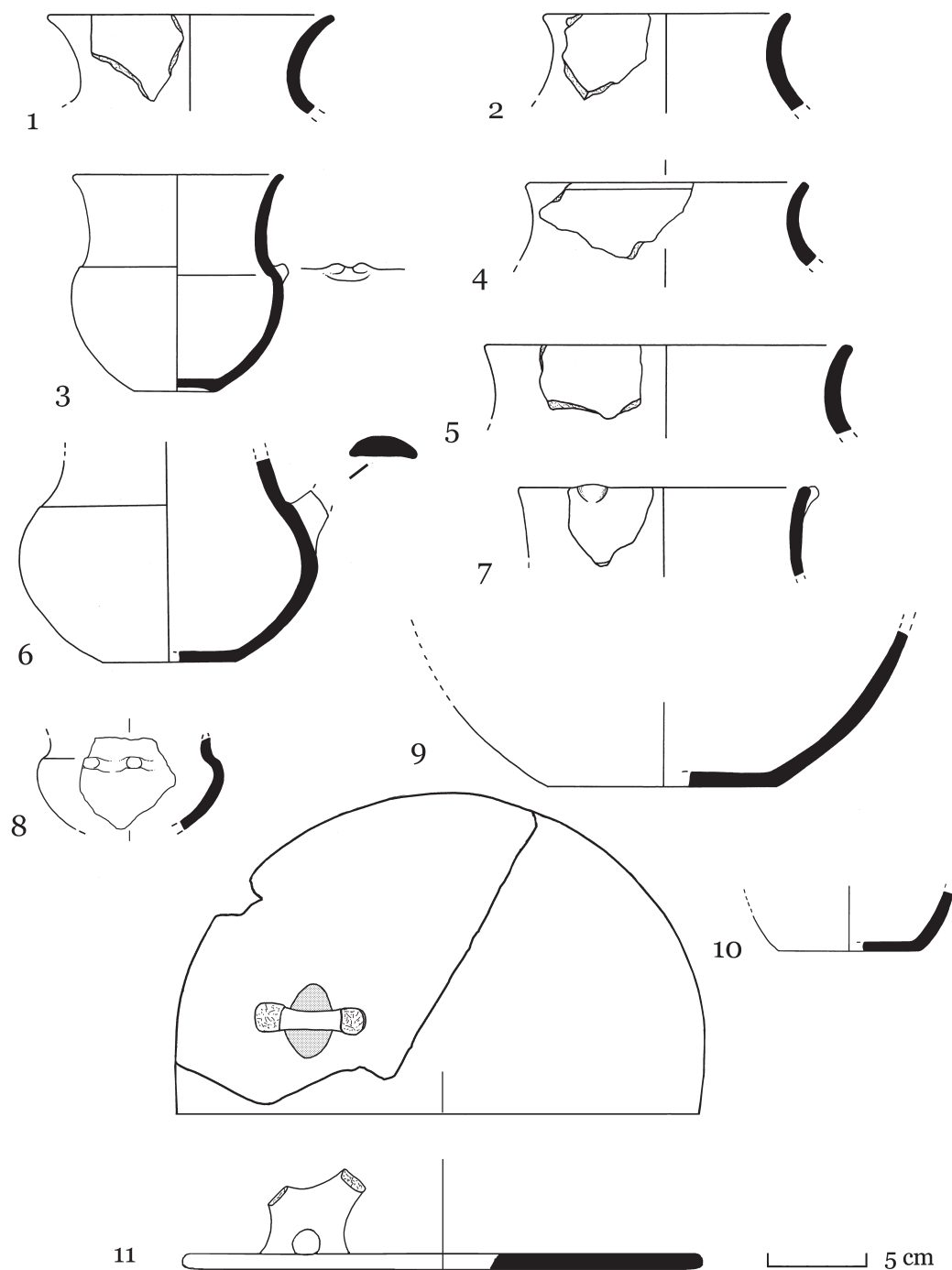


Fig. 35. Pit 1.

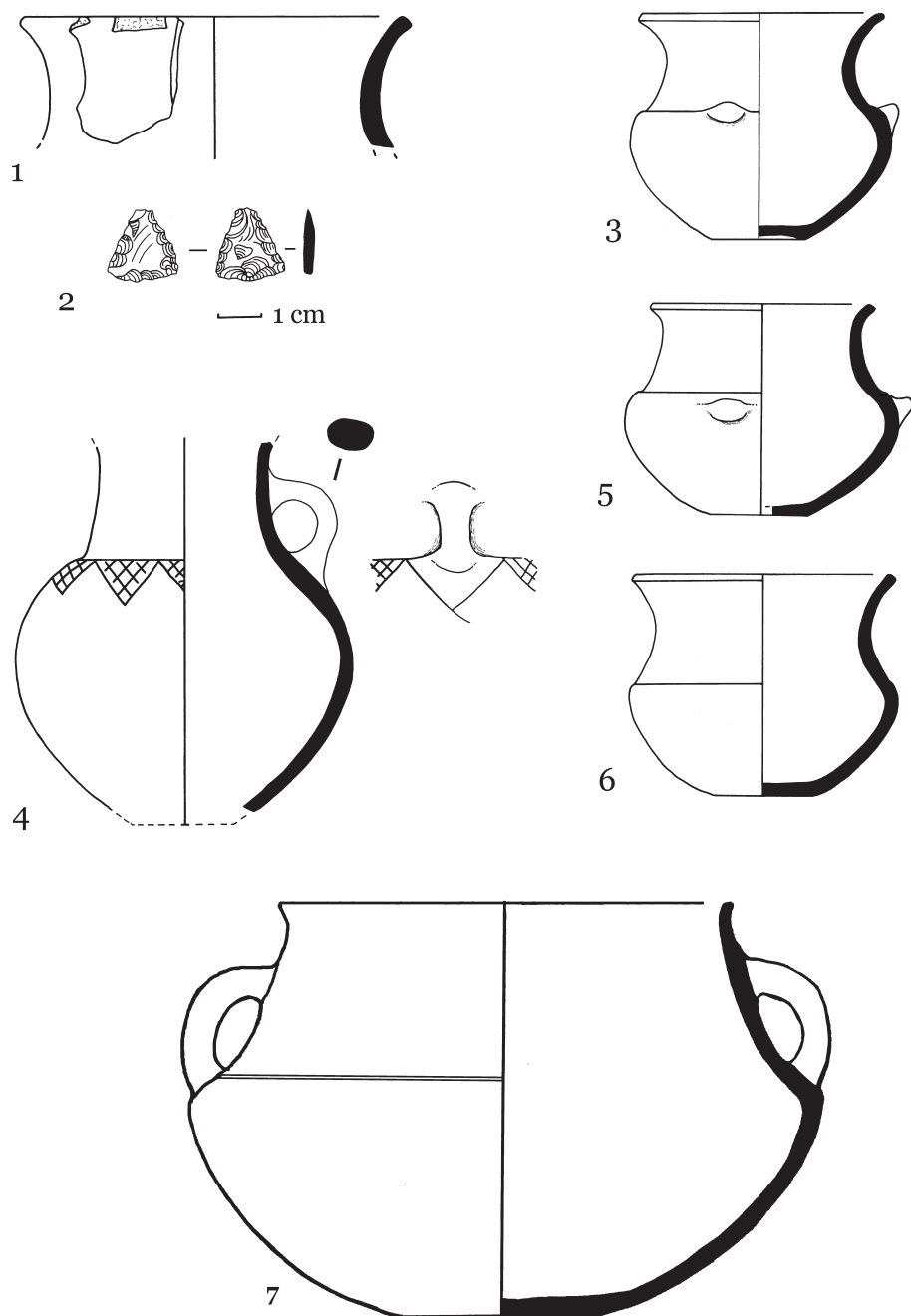


Fig. 36. 1–2, Pit 3; 3–7, Pit 4.

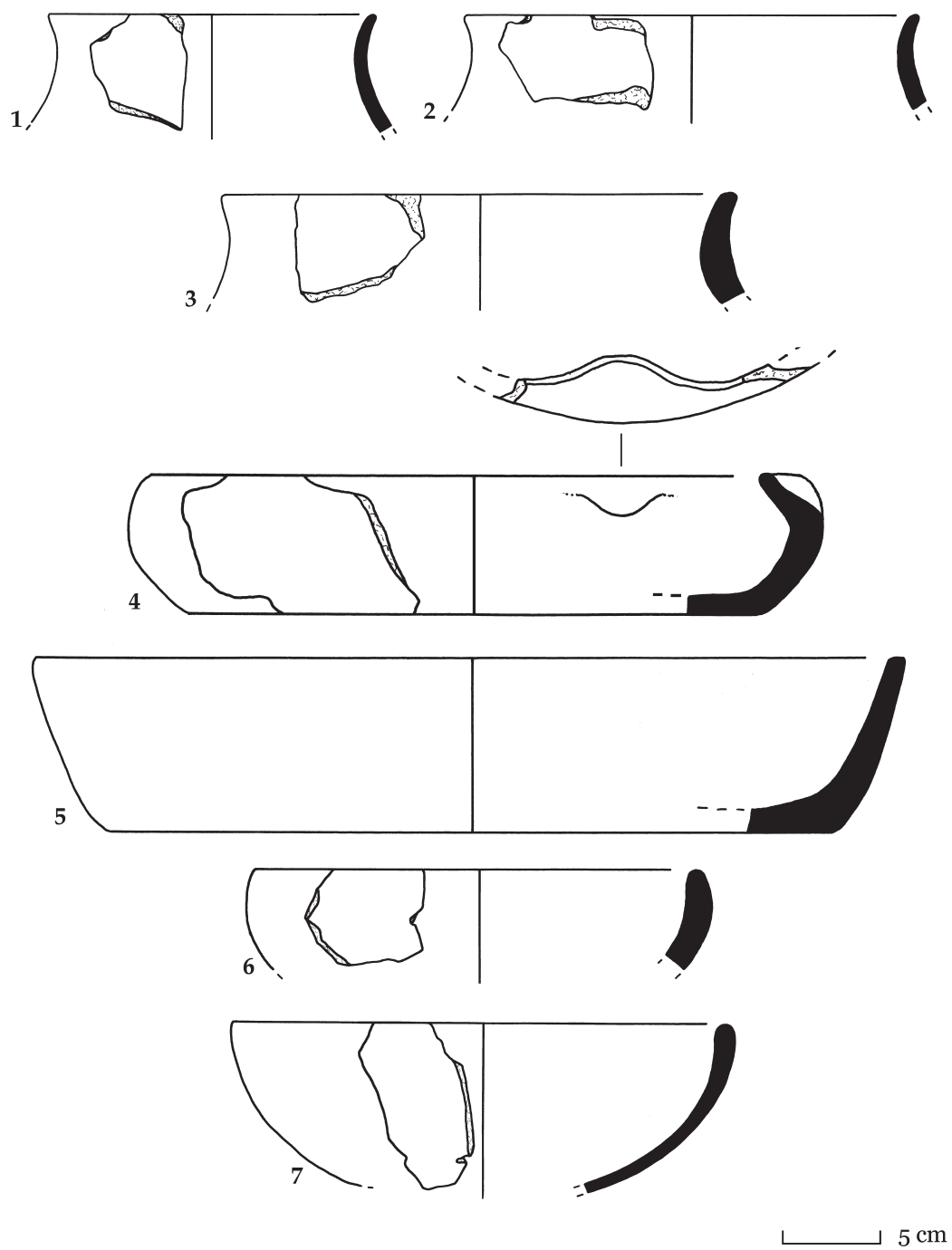


Fig. 37. Pit 4.

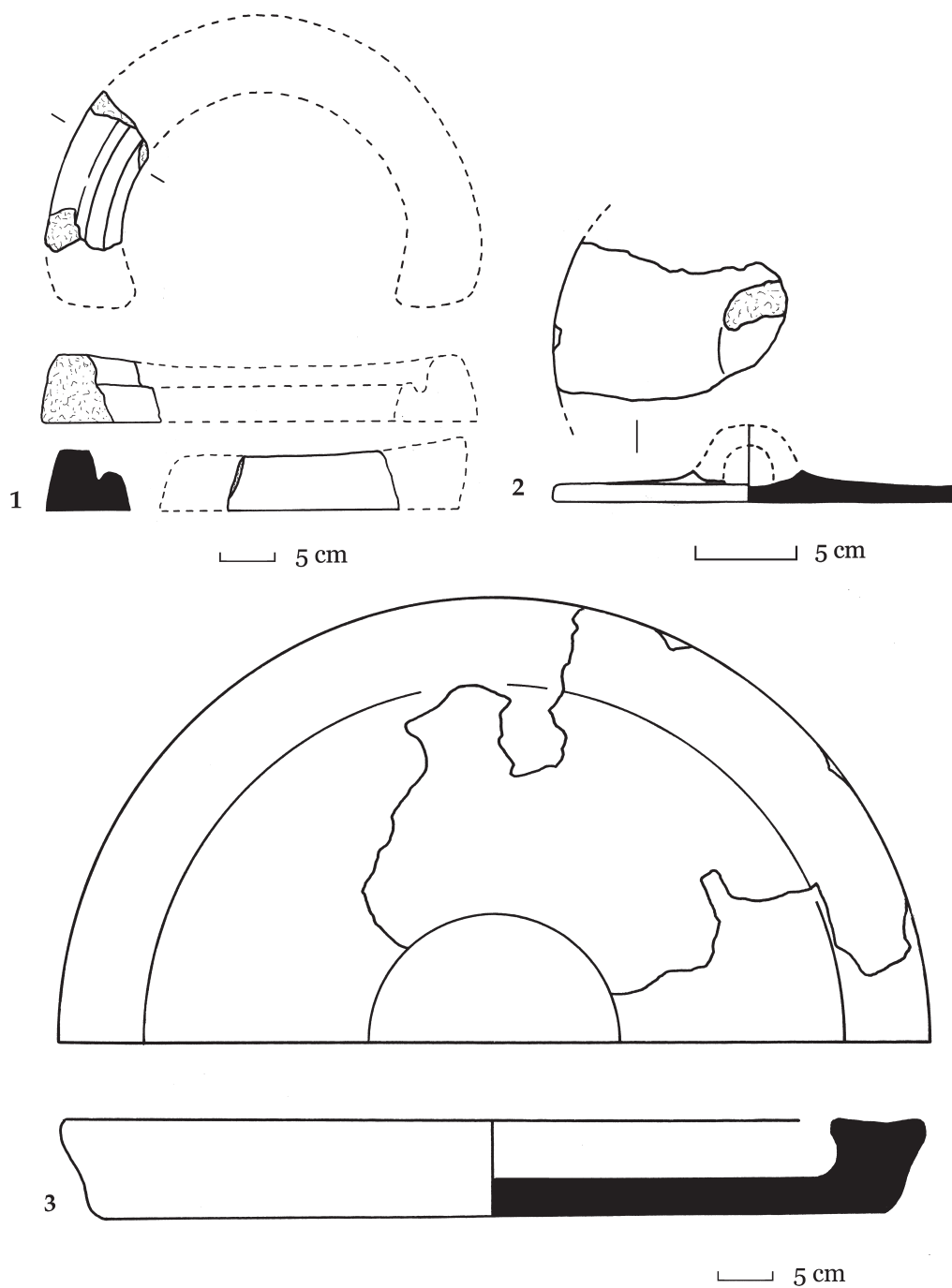


Fig. 38. Pit 4

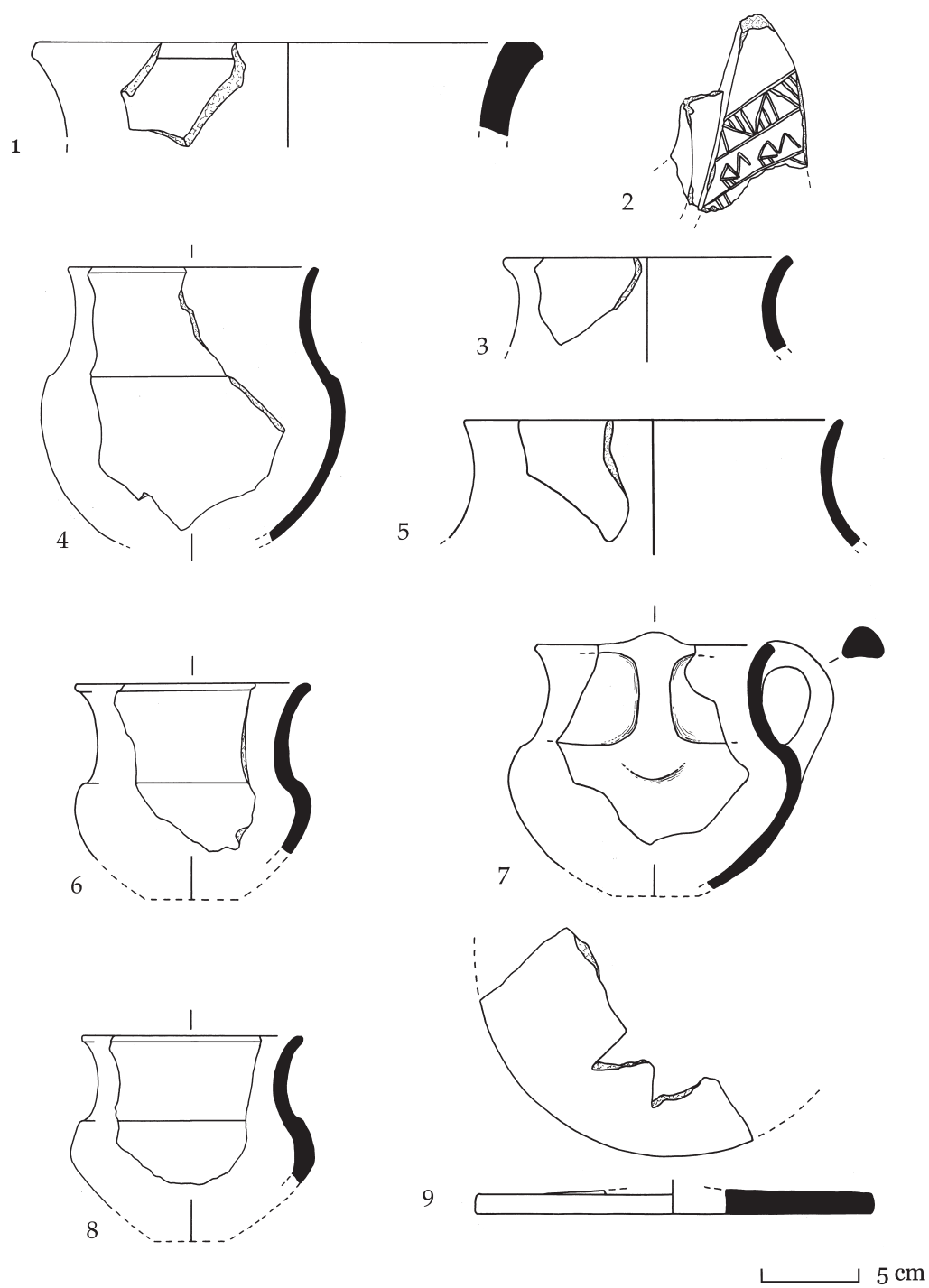


Fig. 39. 1-2, Pit 5; 3-9, Pit 7.

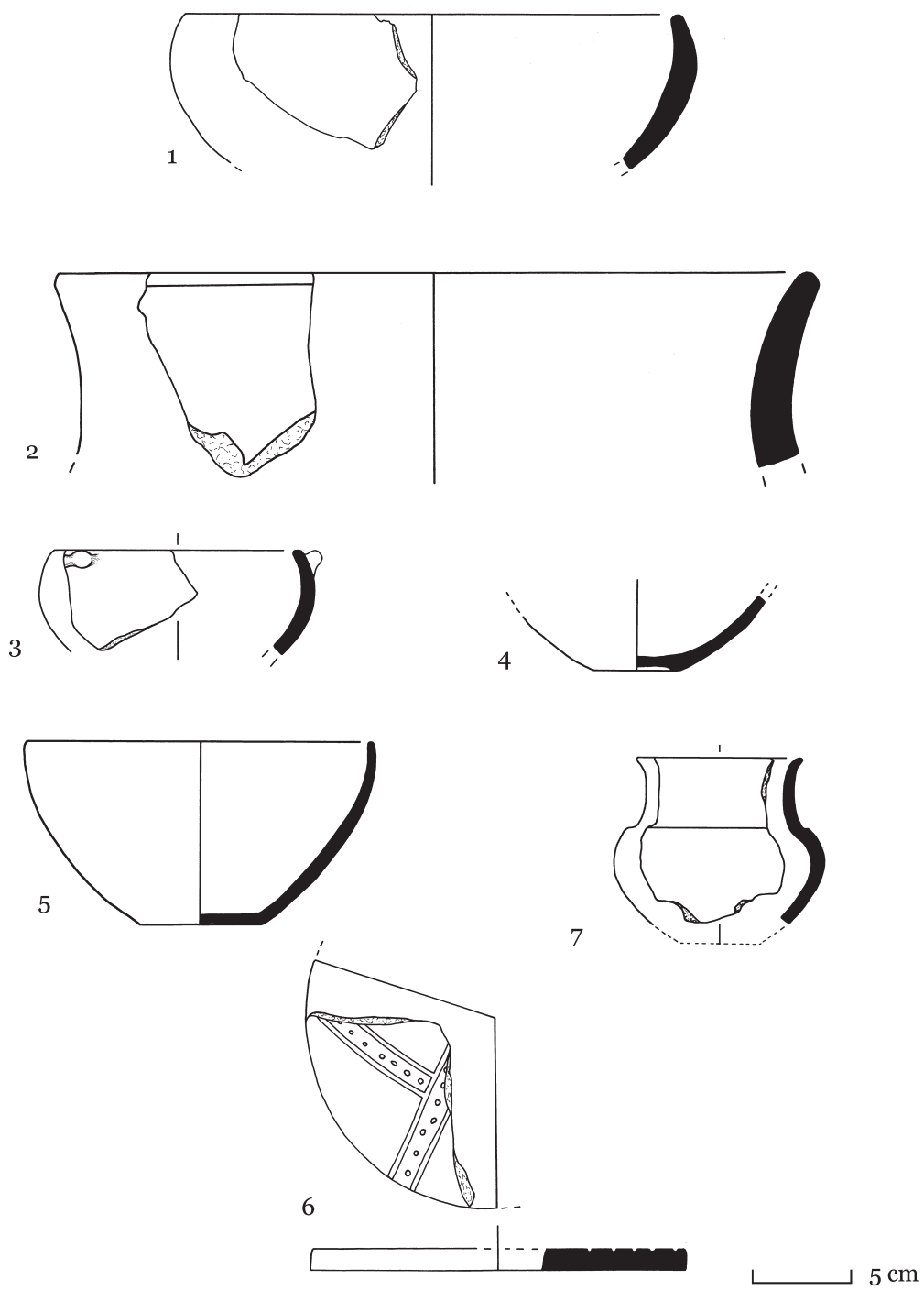


Fig. 40. 1, Pit 8; 2–3, Pit 11; 4, Pit 12; 5–6, Pit 13; 7, Pit 14.

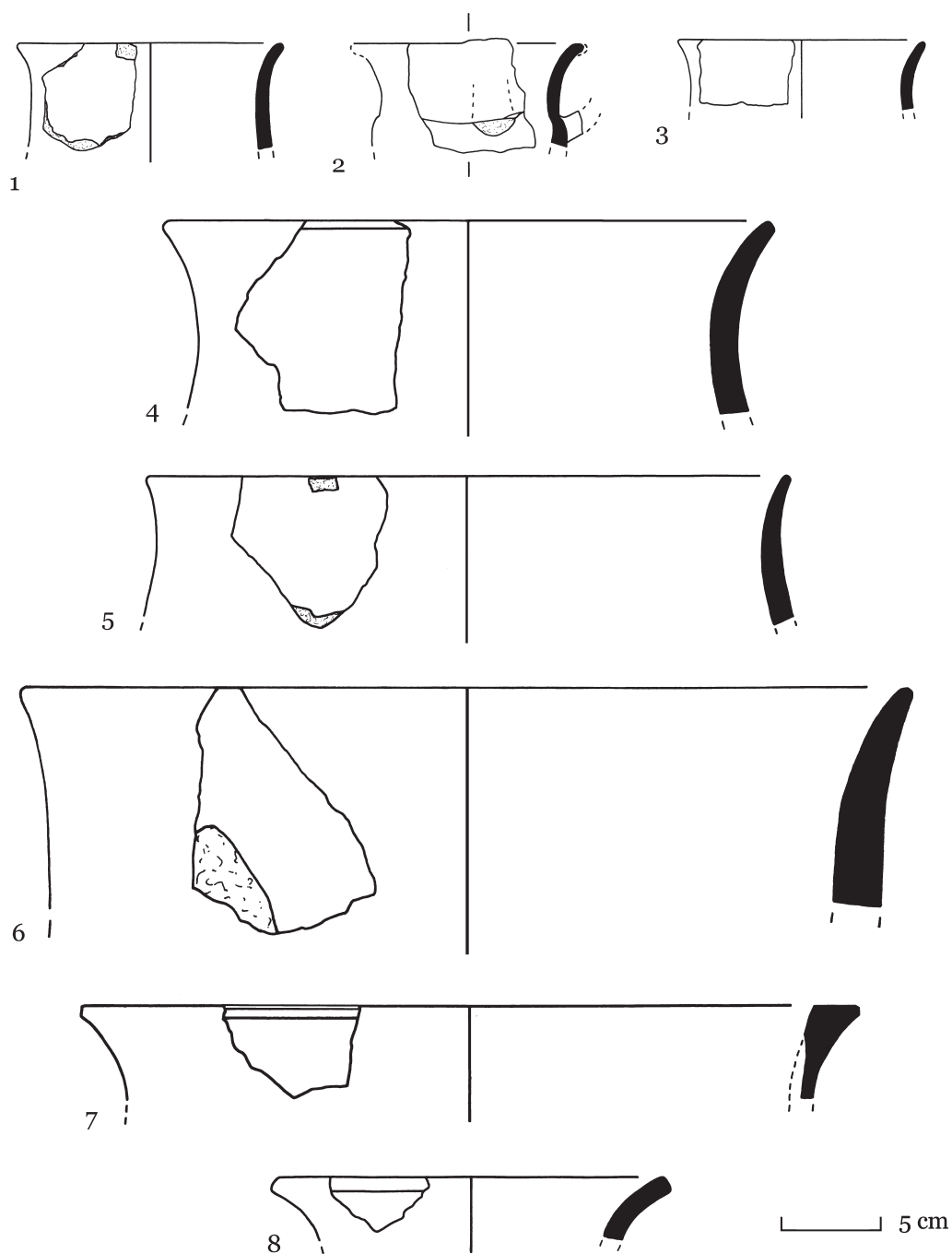


Fig. 41. Choberati 2012, Structure 4, pottery.

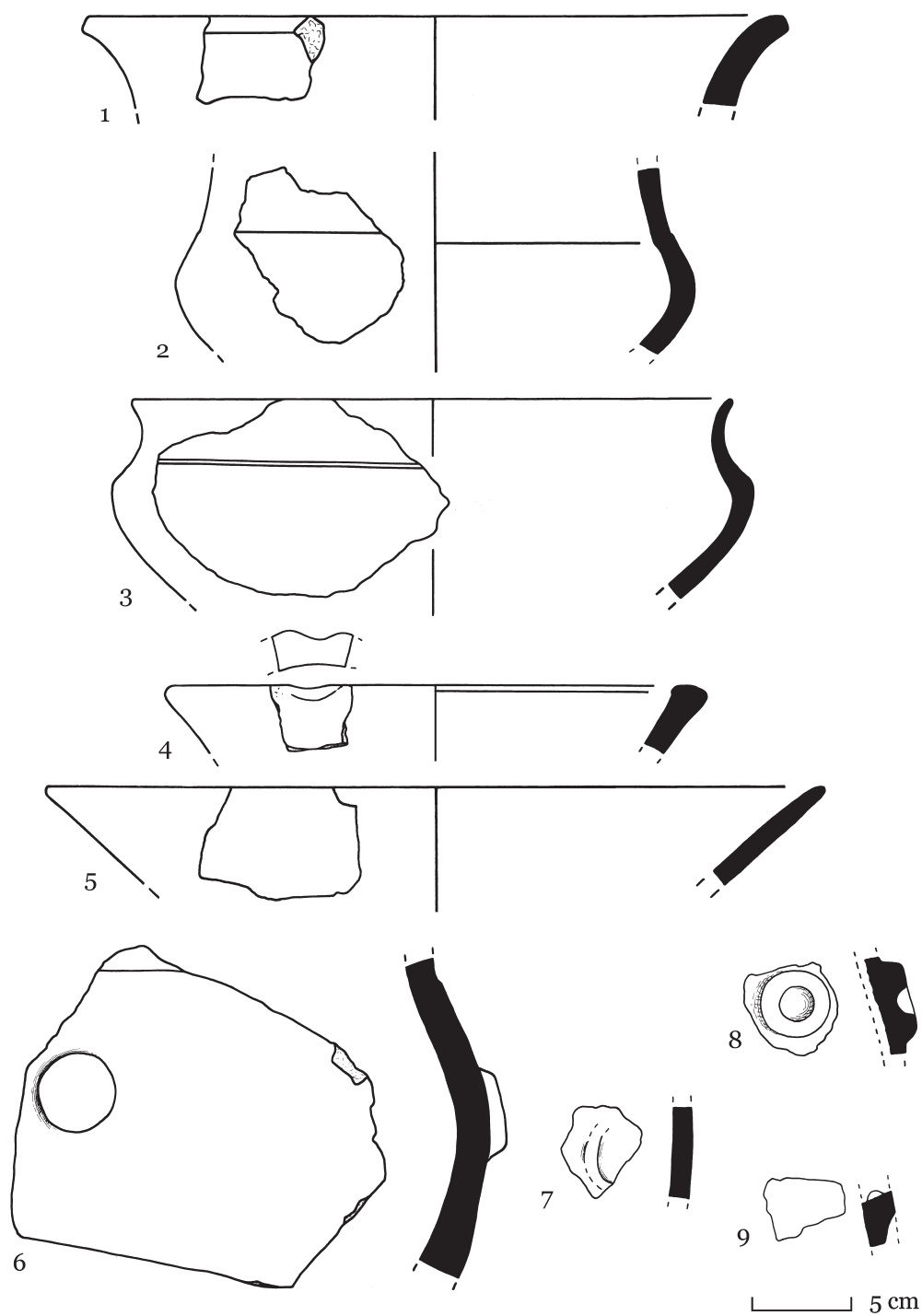


Fig. 42. Choberati 2012, Structure 4, pottery.

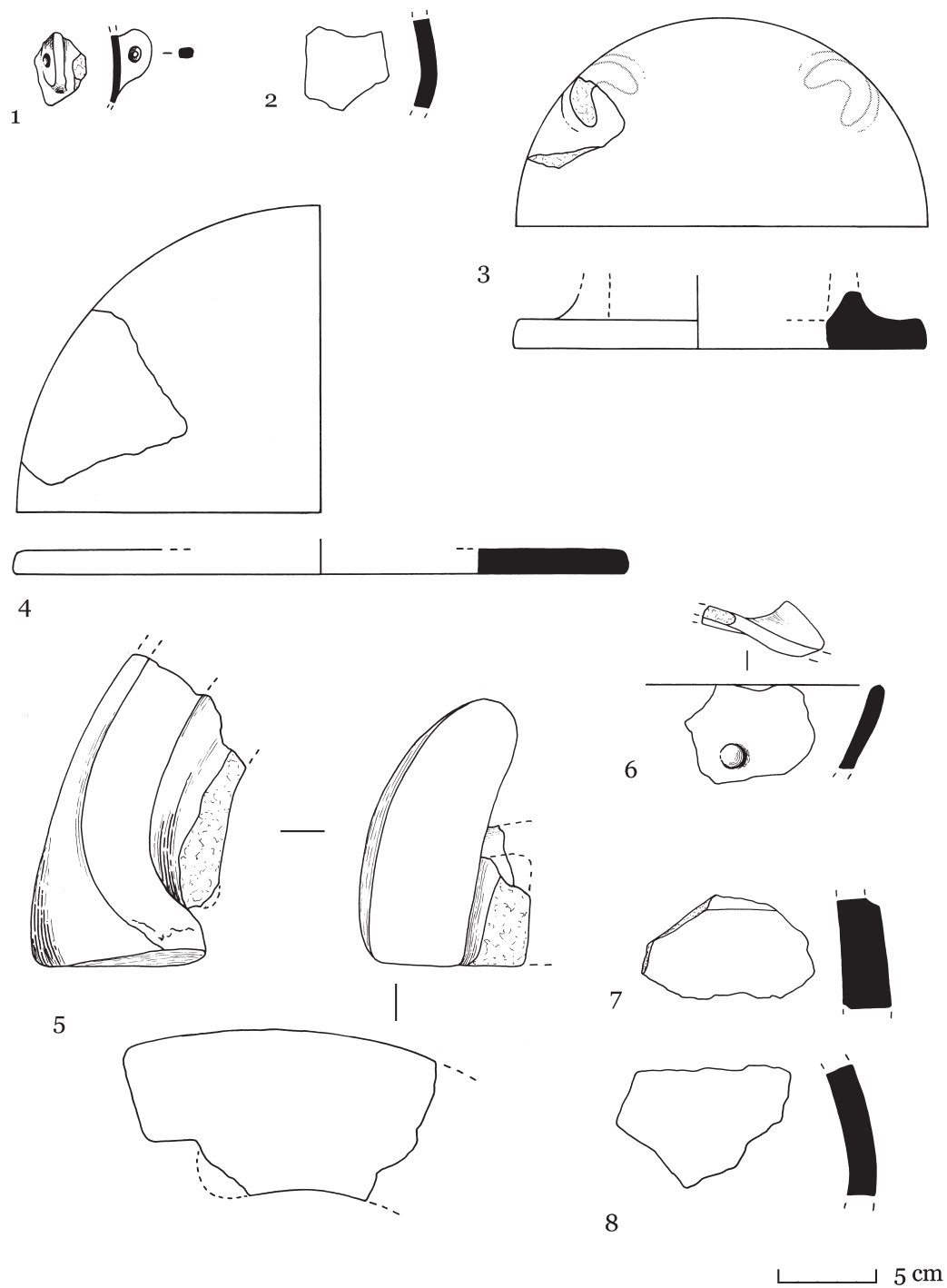


Fig. 43. Choberati 2012, Structure 4, pottery.

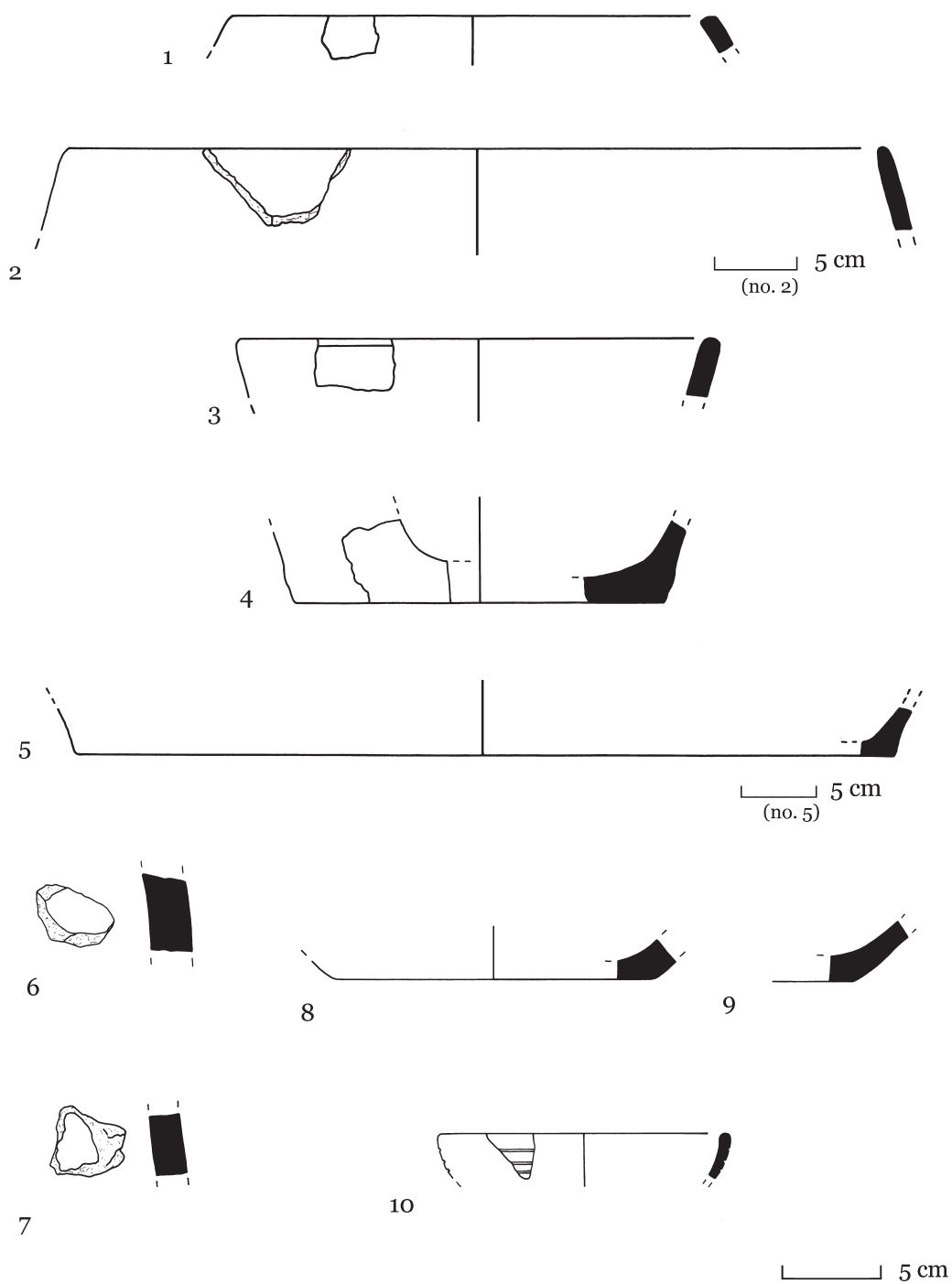


Fig. 44. Choberati 2012, Structure 4, pottery.

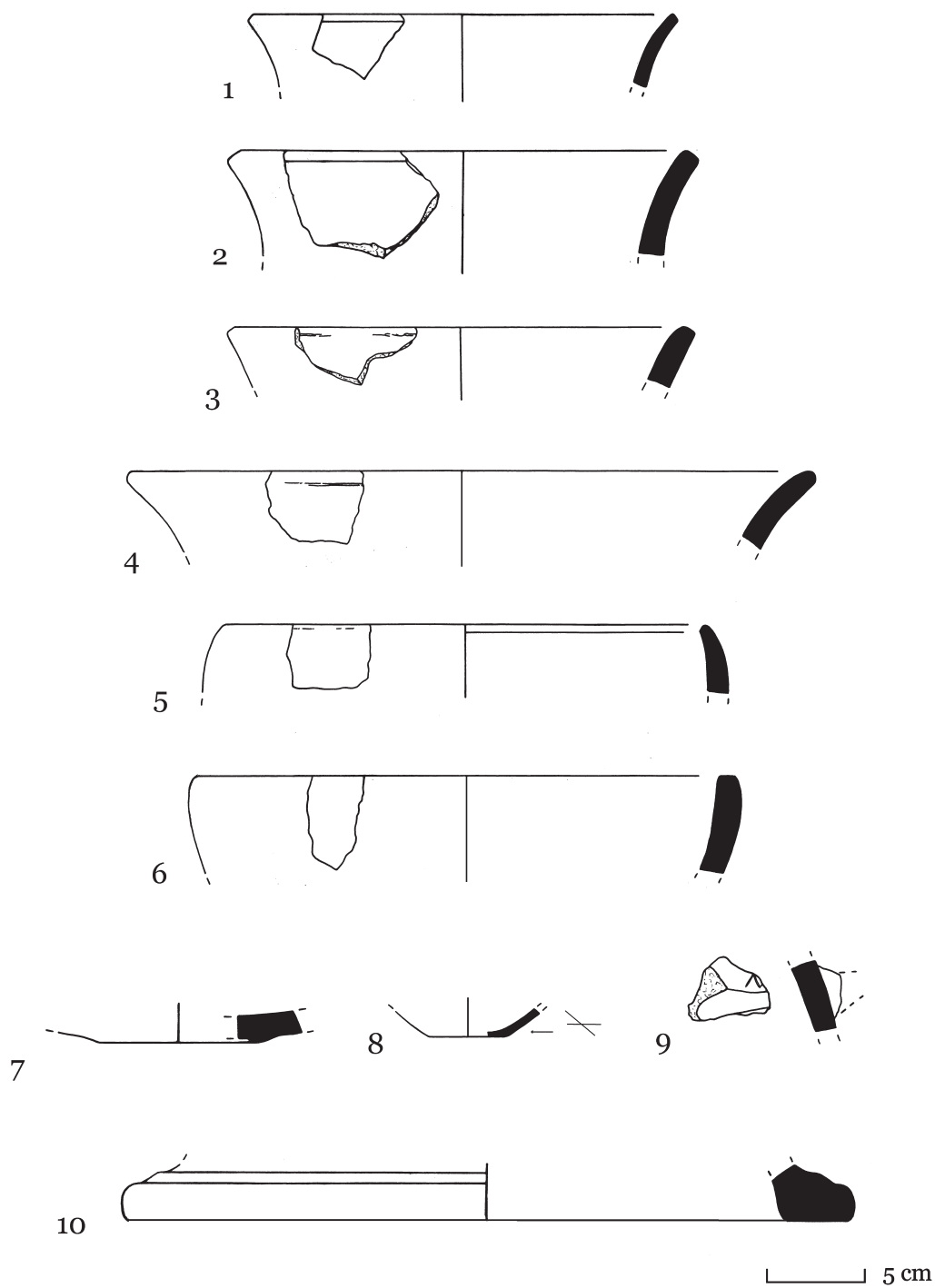


Fig. 45. Chobareti 2012, Square L47, pottery.

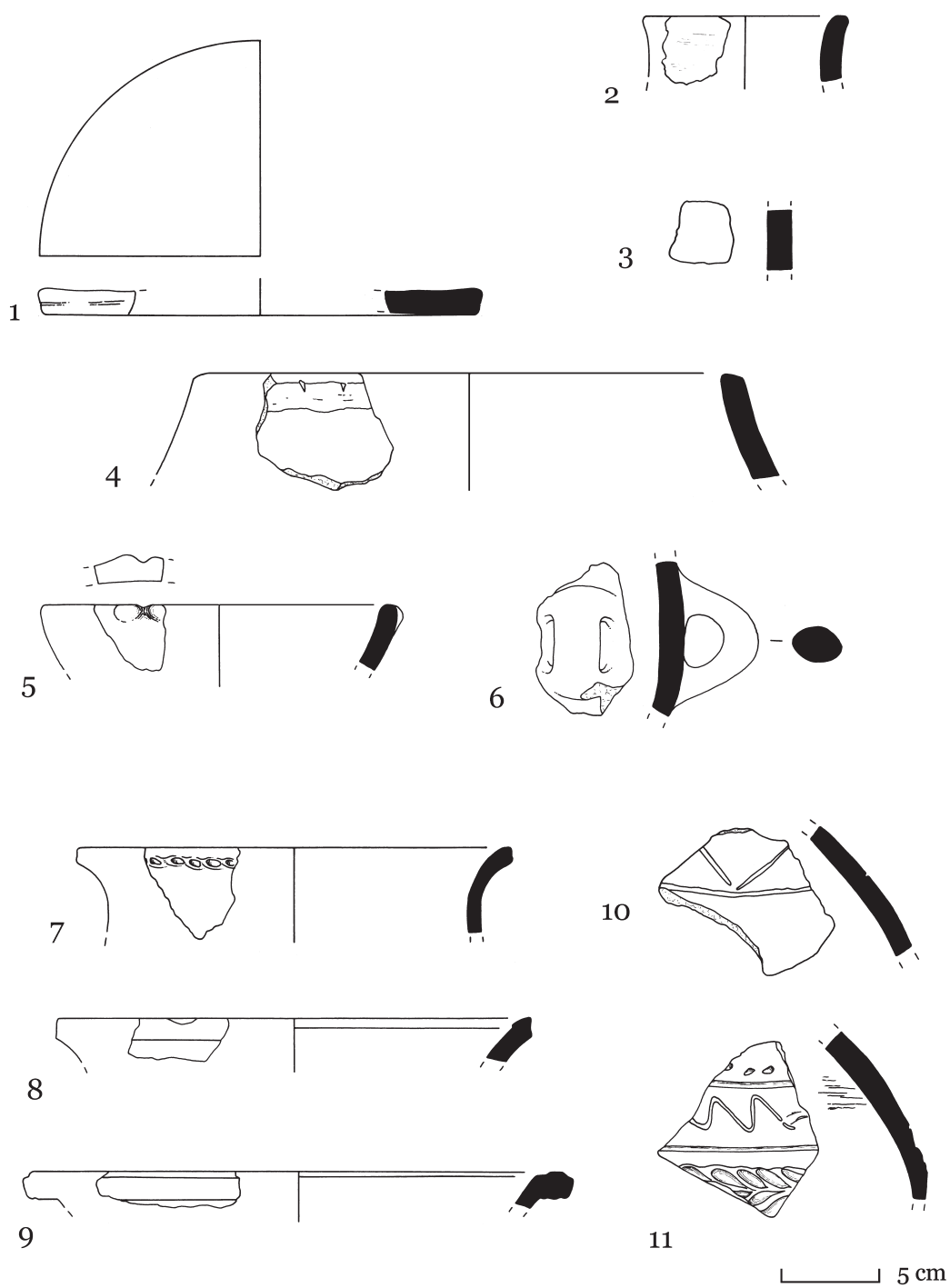


Fig. 46. Chobareti 2012, Square L47, pottery.

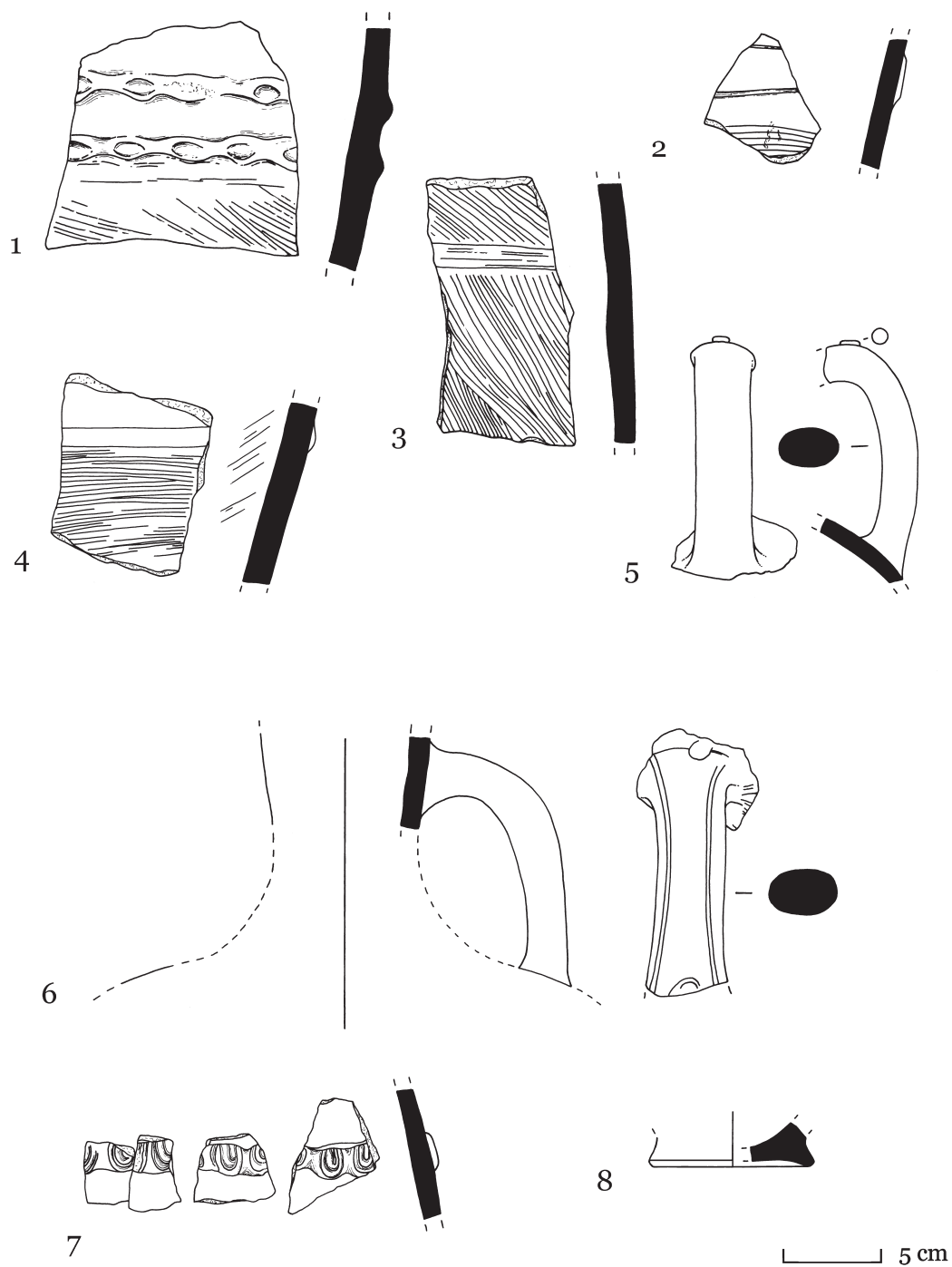


Fig. 47. Chobareti 2012, Squares D49 and D50, pottery.

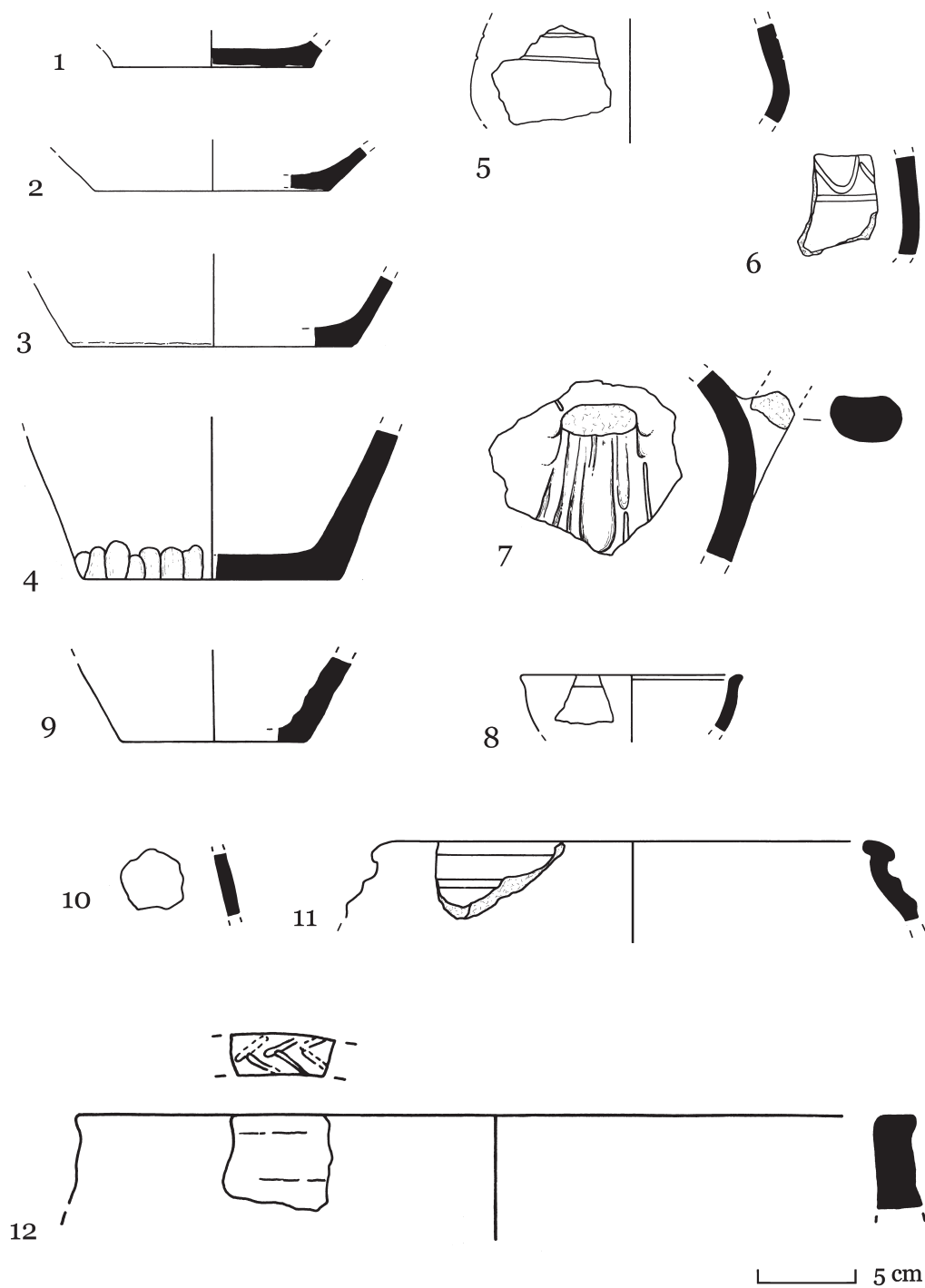


Fig. 48. Chobareti 2012, Squares D49 and D50, pottery.

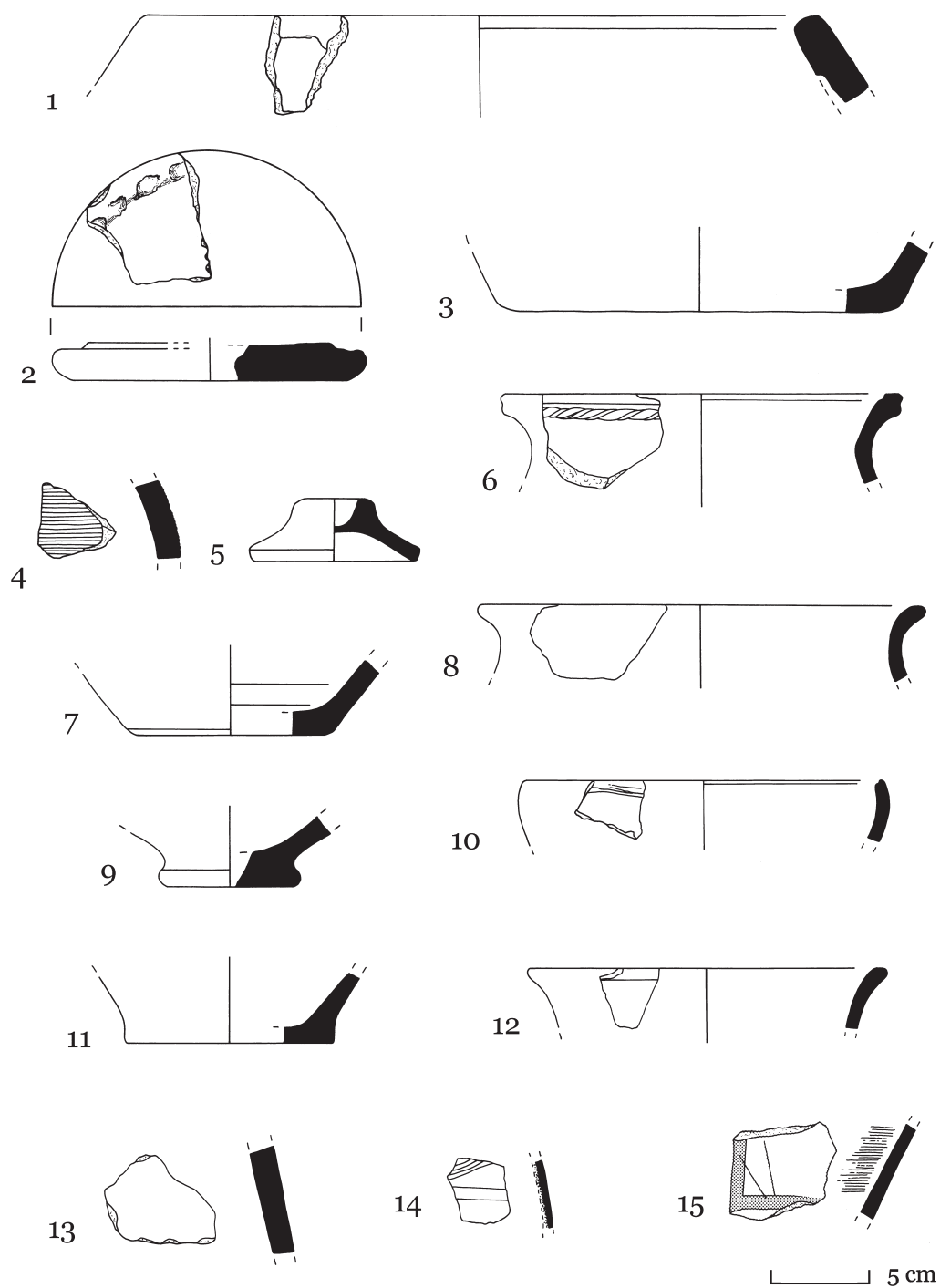


Fig. 49. Chobareti 2012, Squares B48, pottery.

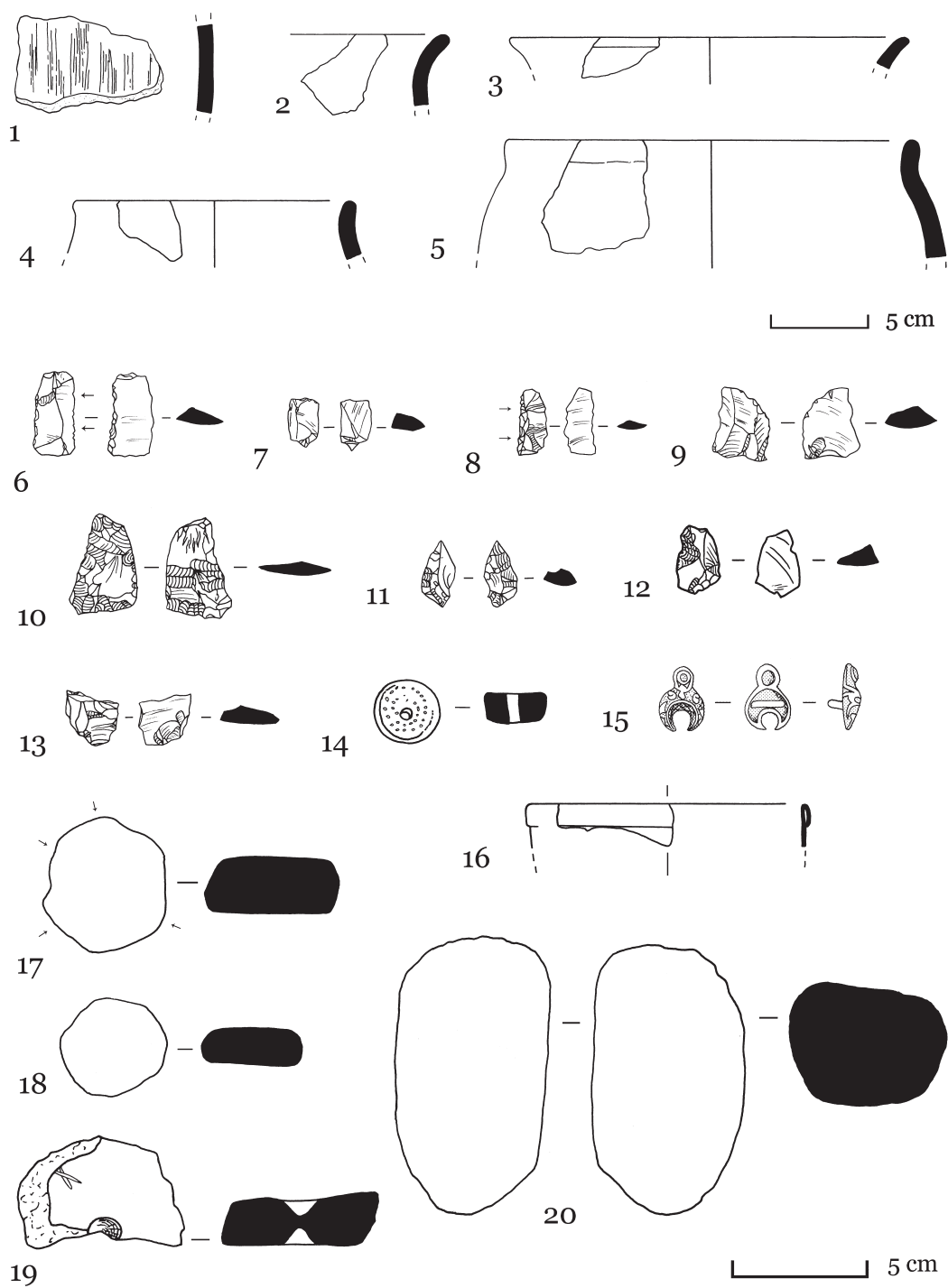


Fig. 50. 1-5 Chobareti 2012, Squares B48, pottery; 6-13 red flint and black obsidian flakes; 14 ceramic bead; 15 gilt silver belt buckle; 16 Glass fragment; 17-19 modified pottery sherds; 20 basalt pestle.

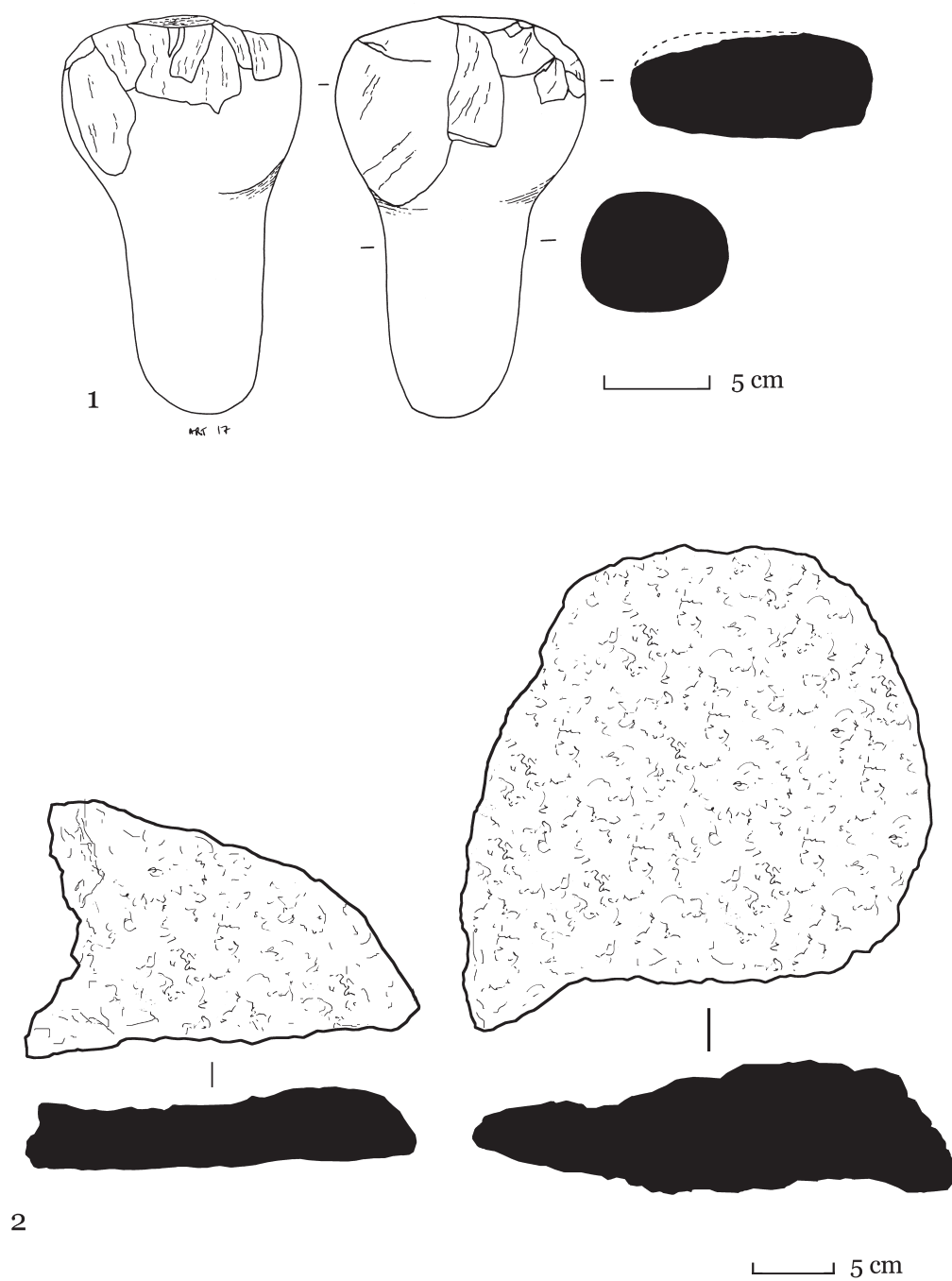


Fig. 51. Chobareti 2012. 1 Square D50.4, basalt hammer stone; 2 Square F42.3 grinding stone fragments.

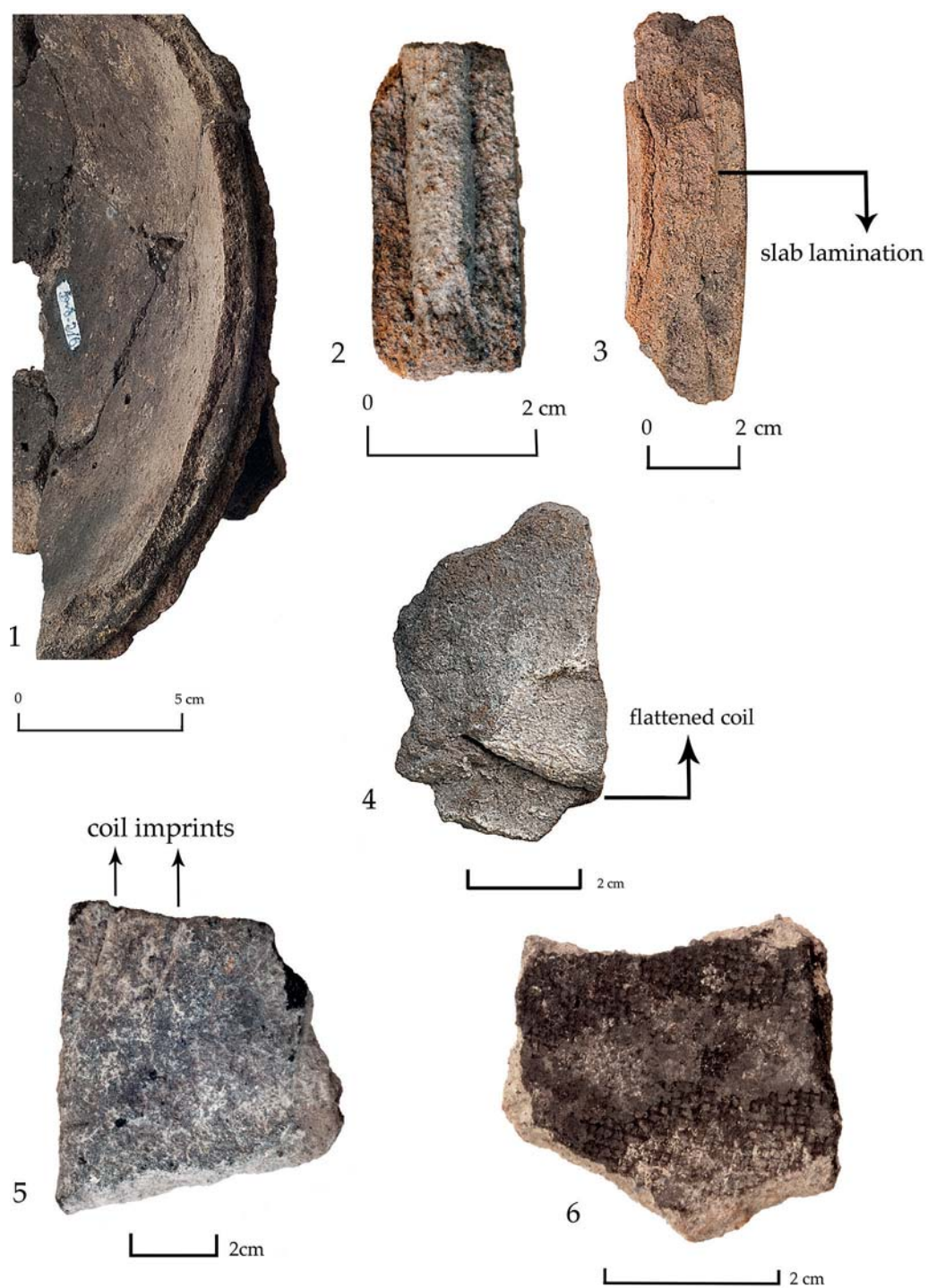


Fig. 52. Selection of pottery sherds showing the method of manufacture. 1-5 Coil technique; 6 Slab technique.

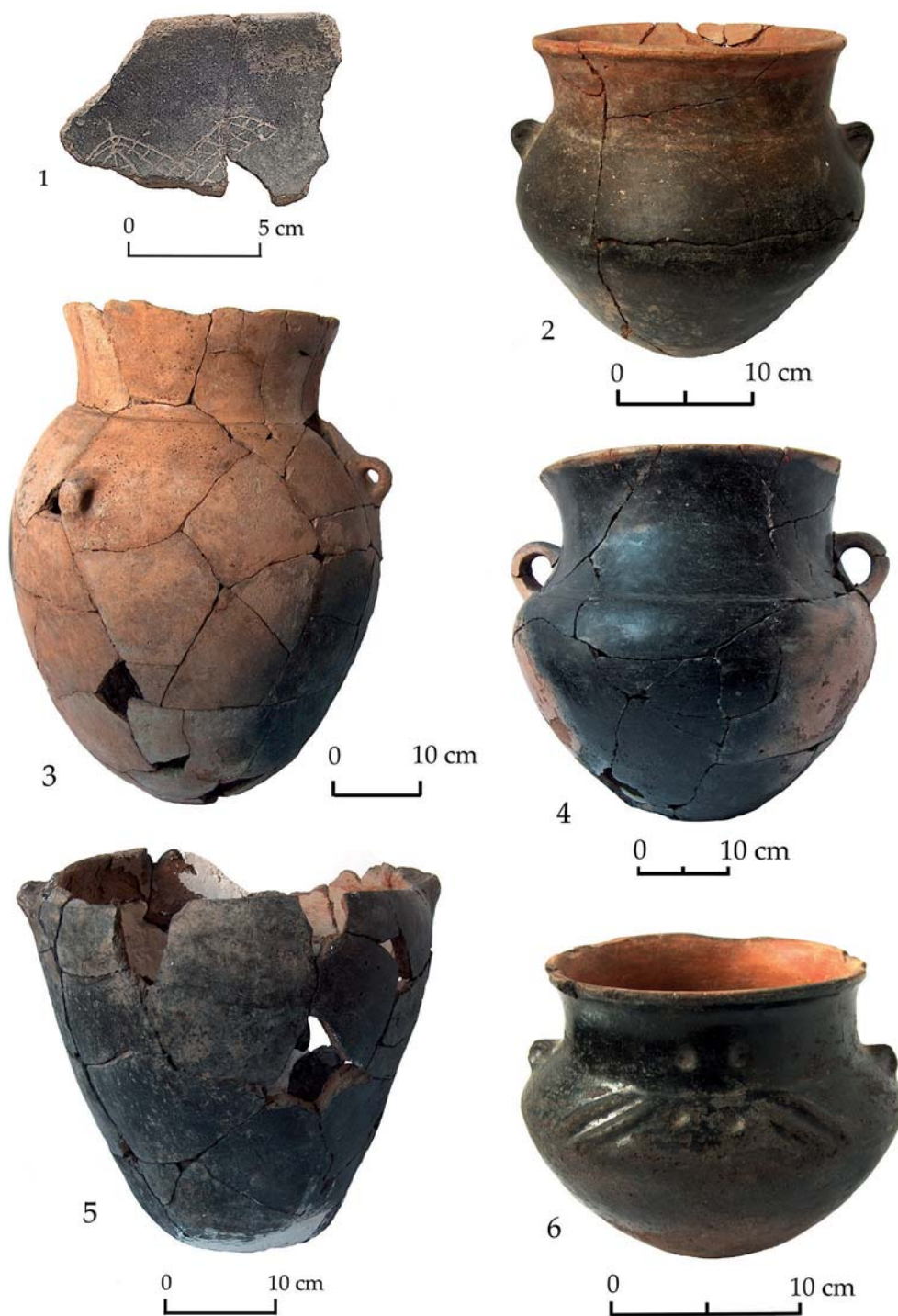


Fig. 53. 1 Structure 4, rim fragment with incised pattern applied after firing; 2 Burial 1; 3, 5 Burial 2; 4 Burial 9; 6 Burial 8.



Fig. 54. 1 Burial 8; 2 Pit 1; 3 Pit 3; 4 Pit 4; 5 Pit 5; 6 Pit 13.

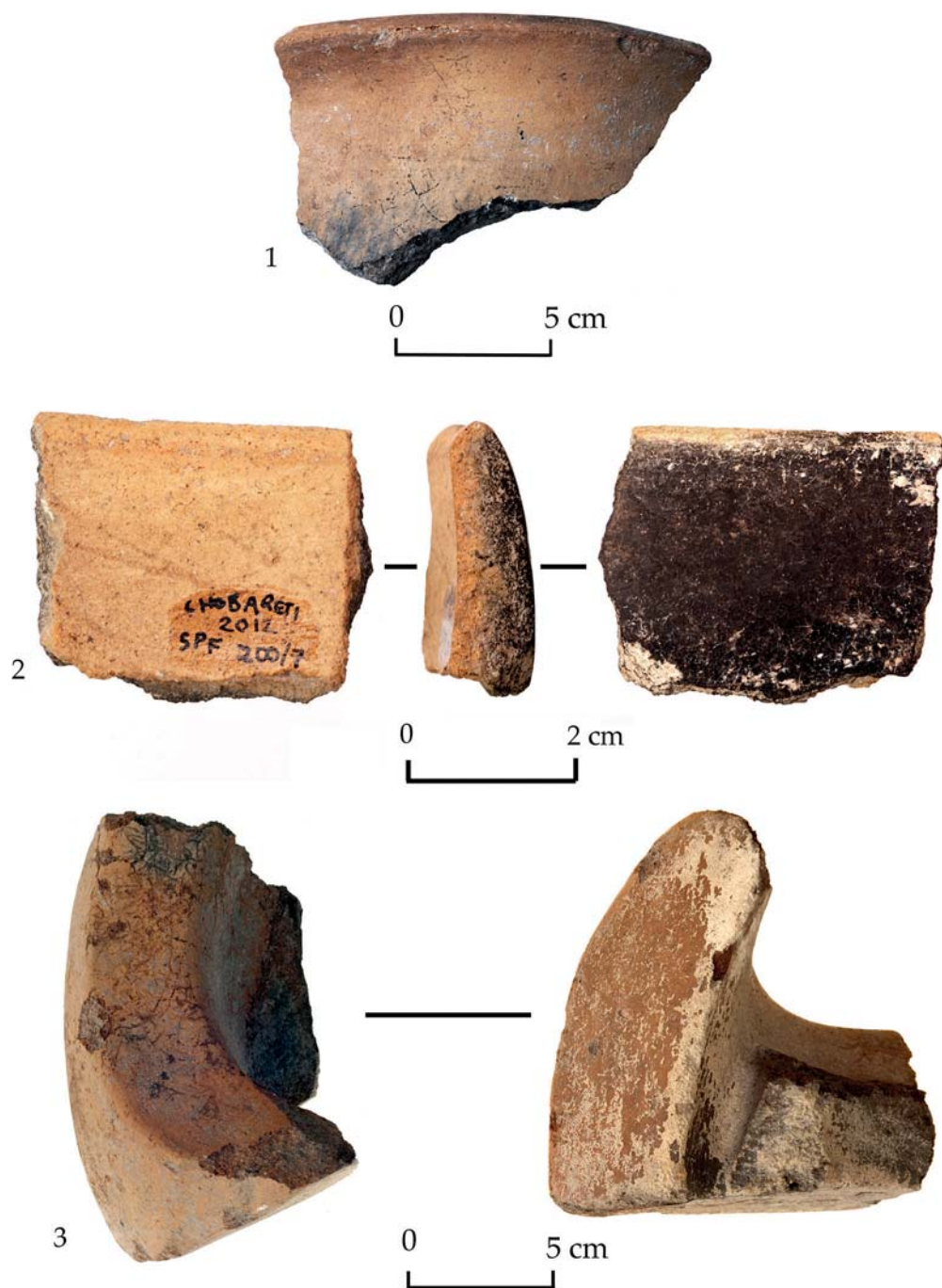


Fig. 55. Chobareti 2012. 1, 3 Structure 4; 2 Square L47.

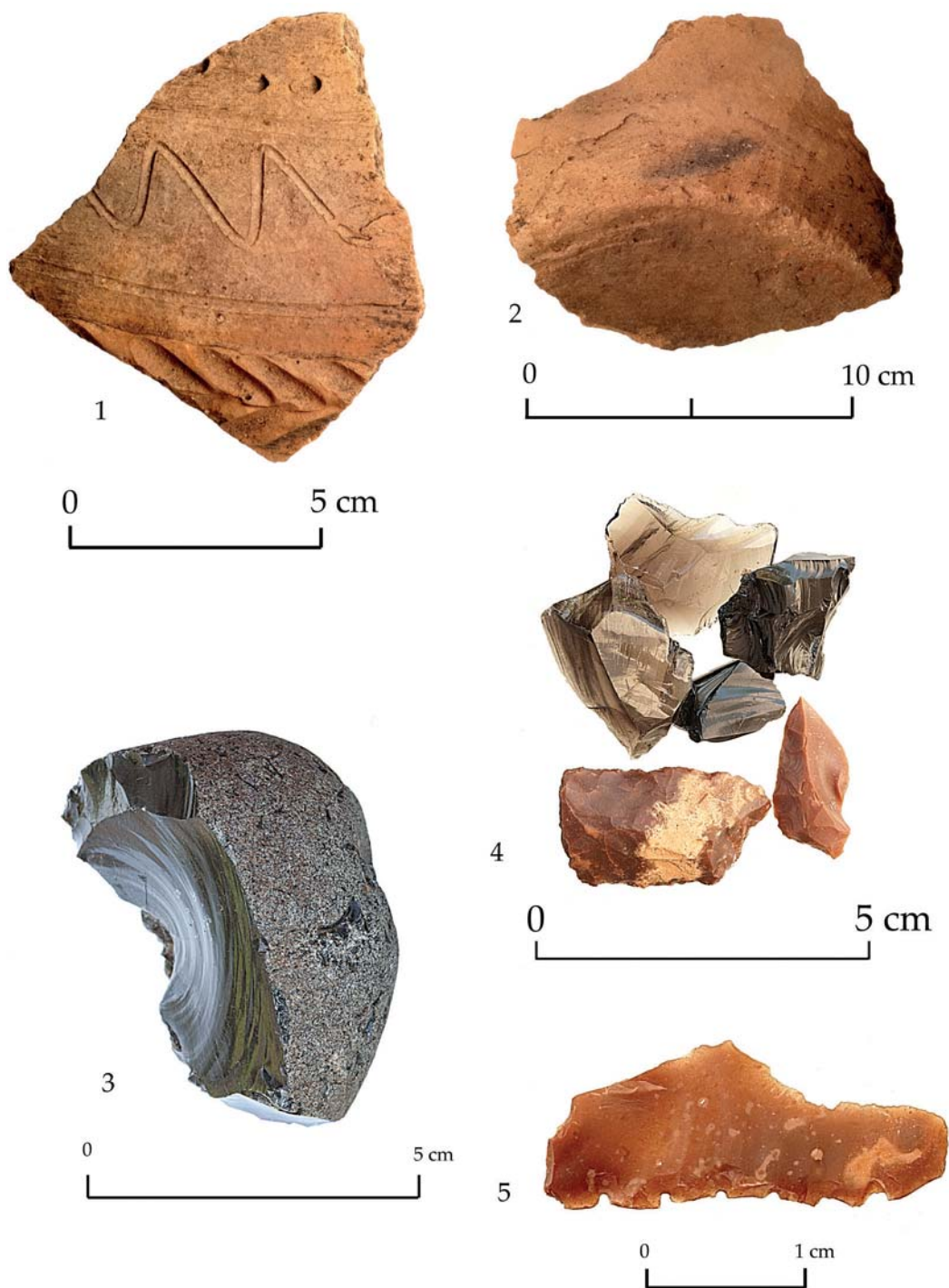


Fig. 56. Chobareti 2012. 1–2 Square D49, pottery fragments; 3 Square B50, obsidian core, riverine pebble;
 4 An assortment of grey and black obsidian, and red flint flakes, some showing worked edges;
 5 Square N49, red flint denticulate sickle blade.

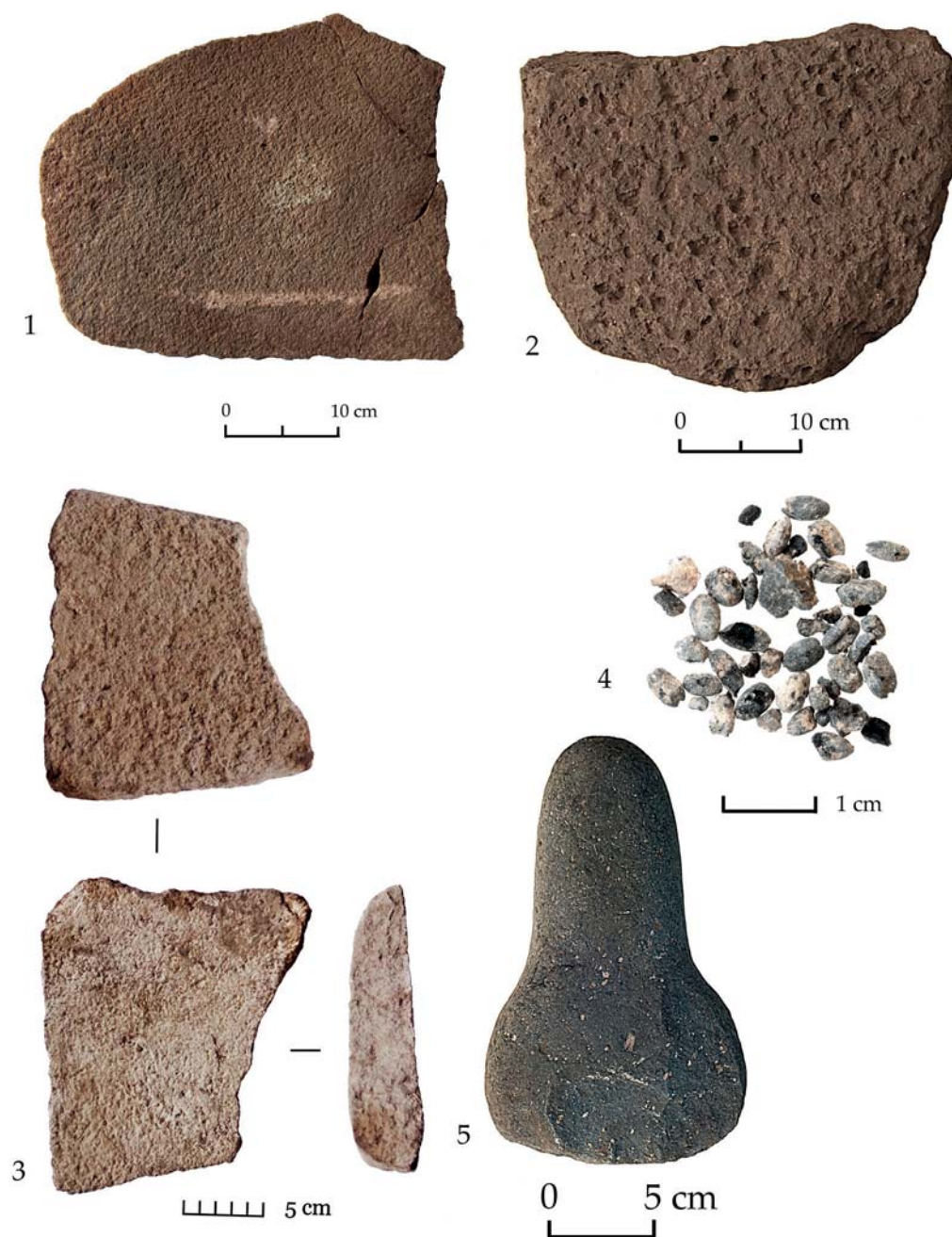


Fig. 57. 1–2 Chobareti 2009, basalt grinders; 3 Chobareti 2012, Structure 4, Square F42.4 fragment of a basalt grinder; 4 Chobareti 2012, carbonised seeds from Structure 4; 5 Square D50.3, basalt hammer stone.

Chobareti Pit 17. Pollen

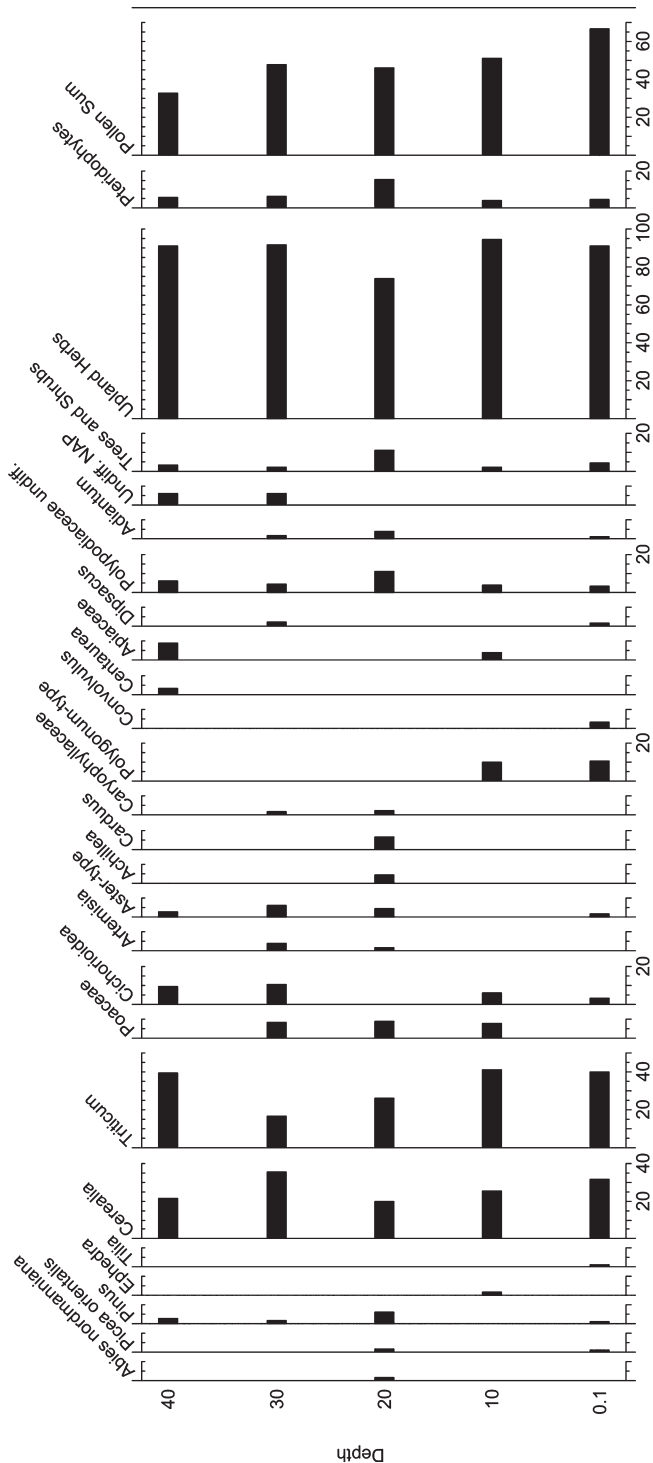


Fig. 38. Pollen diagram, Pit 17.

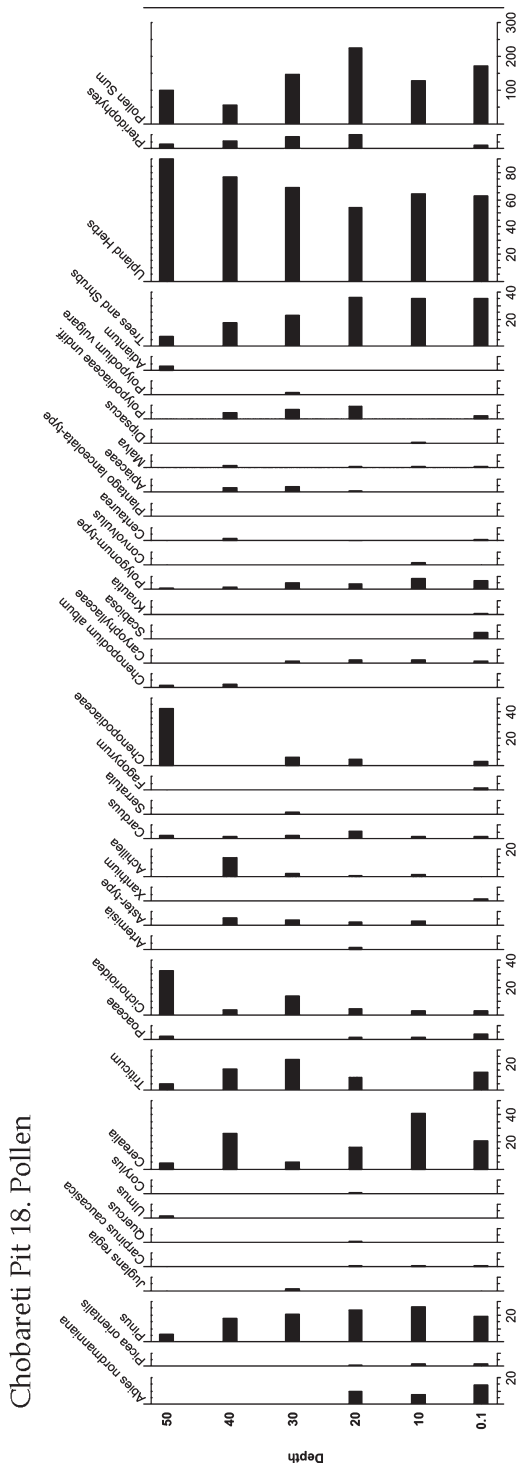


Fig. 59. Pollen diagram. Pit 18.

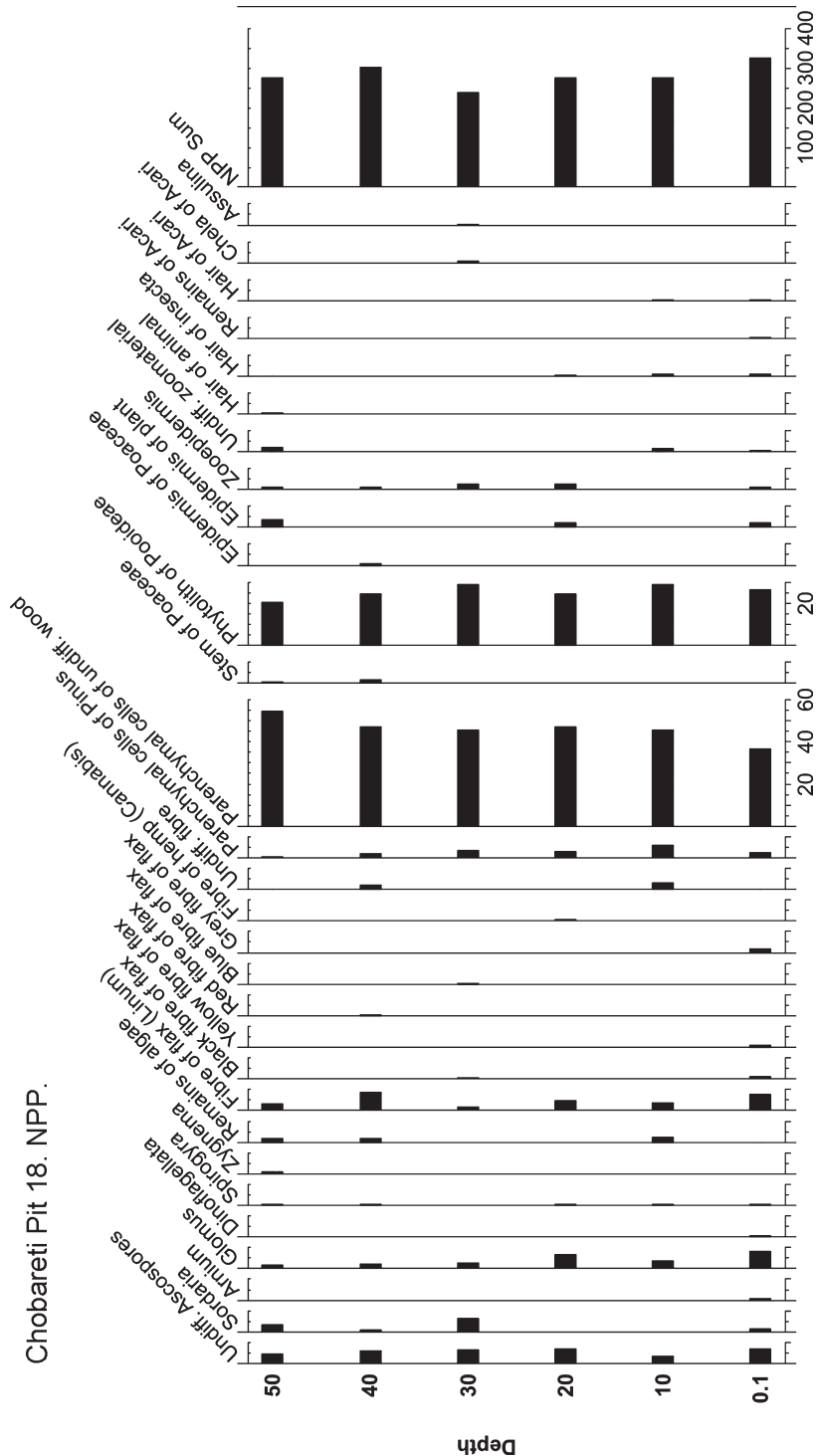


Fig. 61. Non-pollen palynomorphs (NPP) diagram, Pit 18.

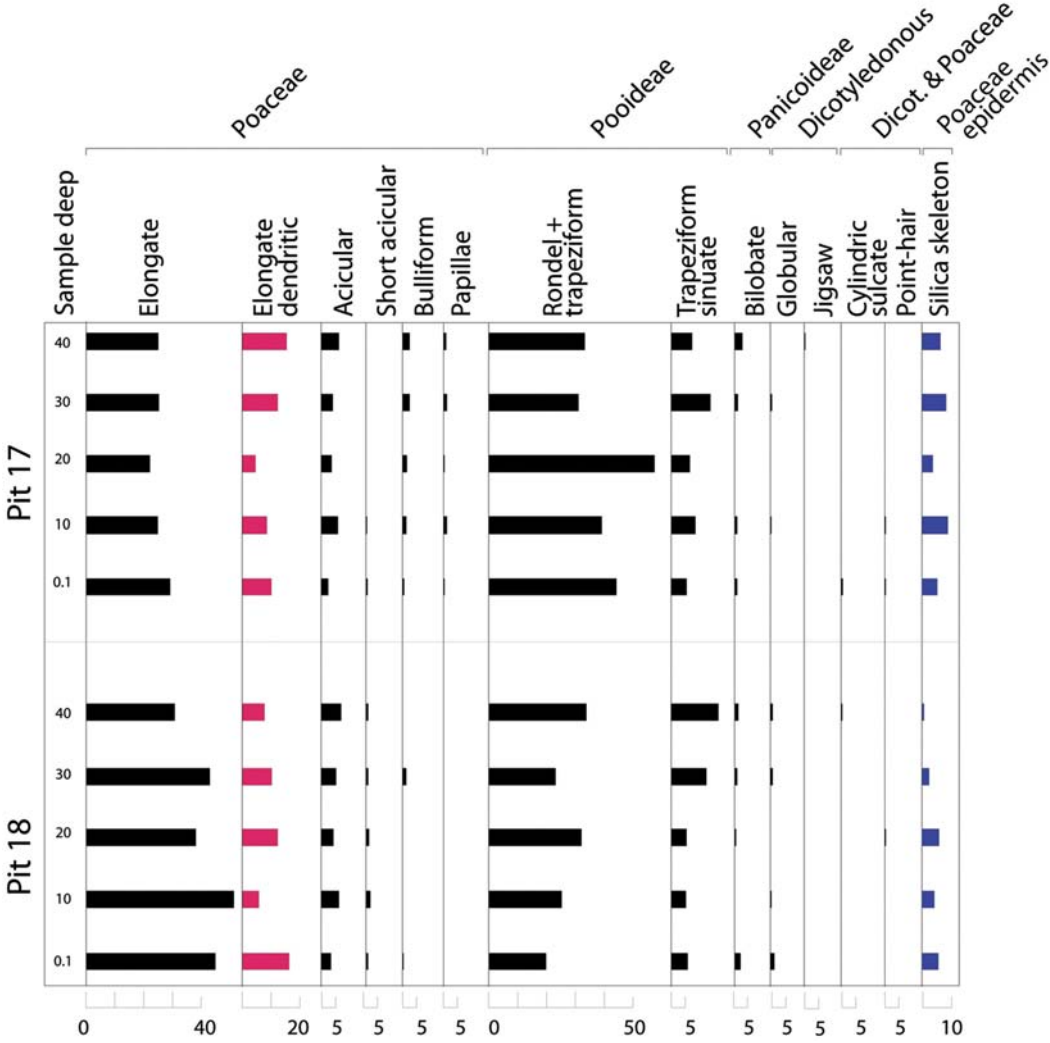


Fig. 62. Phytolith diagram, Pits 17 and 18.

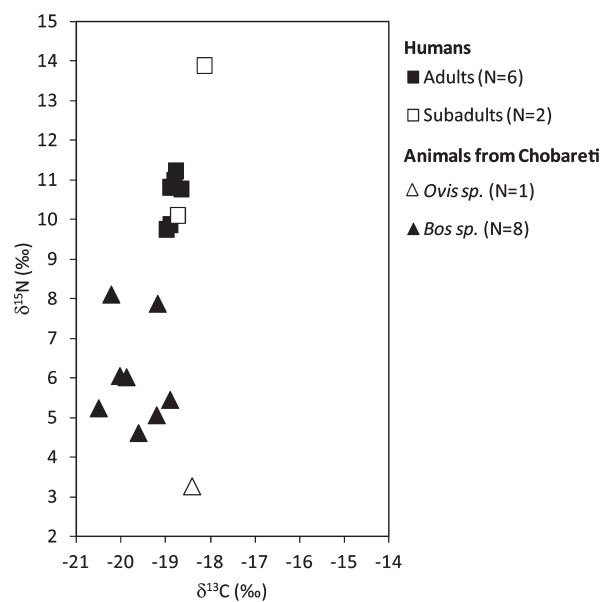


Fig. 63. Carbon and nitrogen stable isotope ratios for animals and humans skeletal remains from Chobareti.

Samples	Pit 16 Ashy layer	Pit 17 Lower part	Pit 17 Upper part	Pit 18 Lower part	Pit 18 Upper part	Total
Samples volumes (litres)	4,9	8,7	12	12,5	10,5	48,6
Domesticated plants						
cf. <i>Cerealia</i> , caryopsis	41	9	17	5	15	87
<i>Cerealia</i> , caryopsis	95	41	16	9	22	183
<i>Cerealia</i> , embryo	95	3	4	1	2	105
<i>Triticum/Hordeum</i> sp., caryopsis	170	84	39	14	8	315
<i>Triticum</i> sp., caryopsis	14	14	17		12	57
<i>Triticum</i> sp., spikelet fork	15					15
<i>Triticum</i> sp., glume basis	4414	138	143	9	91	4795
<i>Triticum</i> sp., rachis fragment	135	20	24	1	13	193
<i>Triticum monococcum</i> , caryopsis	1					1
<i>Triticum monococcum</i> , spikelet fork	2					2
<i>Triticum monococcum/dicoccum</i> , spikelet fork	45	5		4	2	56
<i>Triticum monococcum/dicoccum</i> , glume basis	83					83
<i>Triticum monococcum/dicoccum</i> , rachis fragment	112					112
<i>Triticum</i> cf. <i>dicoccum</i> , caryopsis	13					13
<i>Triticum</i> cf. <i>dicoccum</i> , glume basis	23					23
<i>Triticum dicoccum</i> , caryopsis	36	6	4	3	6	55
<i>Triticum dicoccum</i> , spikelet fork	50		1		1	52
<i>Triticum dicoccum</i> , glume basis	87	61	33		21	202
<i>Triticum dicoccum/nudum</i> , caryopsis	31	8	1	8	5	53
<i>Triticum dicoccum/nudum</i> , spikelet fork	121					121
<i>Triticum dicoccum/nudum</i> , glume basis	1105					1105
<i>Triticum</i> cf. <i>aestivum/durum/turgidum</i> , caryopsis	18					18
<i>Triticum aestivum/durum/turgidum</i> , caryopsis	80	6	7	2	10	105
<i>Triticum</i> hexaploid (<i>aestivum</i> group), spikelet fork	1038	1	6		5	1050
<i>Triticum</i> hexaploid (<i>aestivum</i> group), glume basis	1023	11		2	5	1041
<i>Triticum</i> hexaploid (<i>aestivum</i> group), rachis fragment	423	3	9		3	438
cf. <i>Hordeum vulgare/distichum</i> , caryopsis	8	1		2		11
<i>Hordeum vulgare/distichum</i> , caryopsis					1	1
<i>Hordeum vulgare/distichum</i> hulled, caryopsis	6					6
cf. <i>Panicum miliaceum</i> , caryopsis		3				3
TOTAL CEREALS	9284	414	321	60	222	10,301
Tree and shrub						
<i>Rosa</i> sp., seed		1				1
<i>Rubus</i> sp., seed		1				1
<i>Taxus baccata</i> , seed		2			1	3
Ruderal and arable-weeds						
cf. <i>Avena</i> sp., caryopsis		1			1	2
<i>Avena</i> sp., caryopsis				2		2
<i>Buglossoides arvensis</i> , seed		1				1
<i>Chenopodium</i> sp., seed	20	24	4	3	7	58
<i>Chenopodium album</i> , seed	6	13	4		8	31
<i>Chenopodium hybridum</i> , seed		3	2		4	9
<i>Euphorbia</i> sp., seed			1		1	2
<i>Euphorbia helioscopia</i> , seed		2				2
<i>Fallopia convolvulus</i> , seed	10	14	3		5	32
<i>Galium</i> sp., seed	49	54	8		15	126
<i>Galium aparine</i> , seed					3	3
<i>Galium aparine/spurium</i> , seed		128	33	3	32	196
<i>Hyoscyamus niger</i> , seed		2				2
<i>Papaver</i> sp., seed	4					4
<i>Polygonum</i> sp., seed		7	9		2	18
<i>Polygonum aviculare</i> , seed		1				1
<i>Rumex</i> sp., seed	25					25
cf. <i>Urtica dioica</i> , seed			1			1
<i>Urtica dioica</i> , seed		2	1			3
Miscellaneous						
cf. <i>Bromus</i> sp., caryopsis	135		1			136
<i>Bromus</i> sp., caryopsis	161	16	9	4	4	194
Brassicaceae, seed	3					3
<i>Carex</i> sp., seed	1					1
Caryophyllaceae, seed		1				1
Fabaceae type <i>Trifolium</i> , seed	15	23	6	1	9	54
Fabaceae type <i>Vicia</i> , seed		1				1
Lamiaceae, seed		1	2			3
<i>Poa</i> sp., caryopsis	4					4
Poaceae, caryopsis	45	16	5	6	20	92
Poaceae type <i>Poa</i> , caryopsis		4	4		3	11
Polygonaceae, seed	11		7		3	21
Rosaceae type <i>Potentilla</i> , seed		3	1			4
<i>Teucrium</i> sp., seed			1			1
<i>Teucrium</i> cf. <i>botrys</i> , seed		3				3
Foliar scar			3			3
Total	9773	738	426	79	340	11,356
Concentration/litres	1994,5	84,8	35,5	6,3	32,4	233,7

Fig. 64. Quantities of plant macroremains identified in Pits 16, 17 and 18.

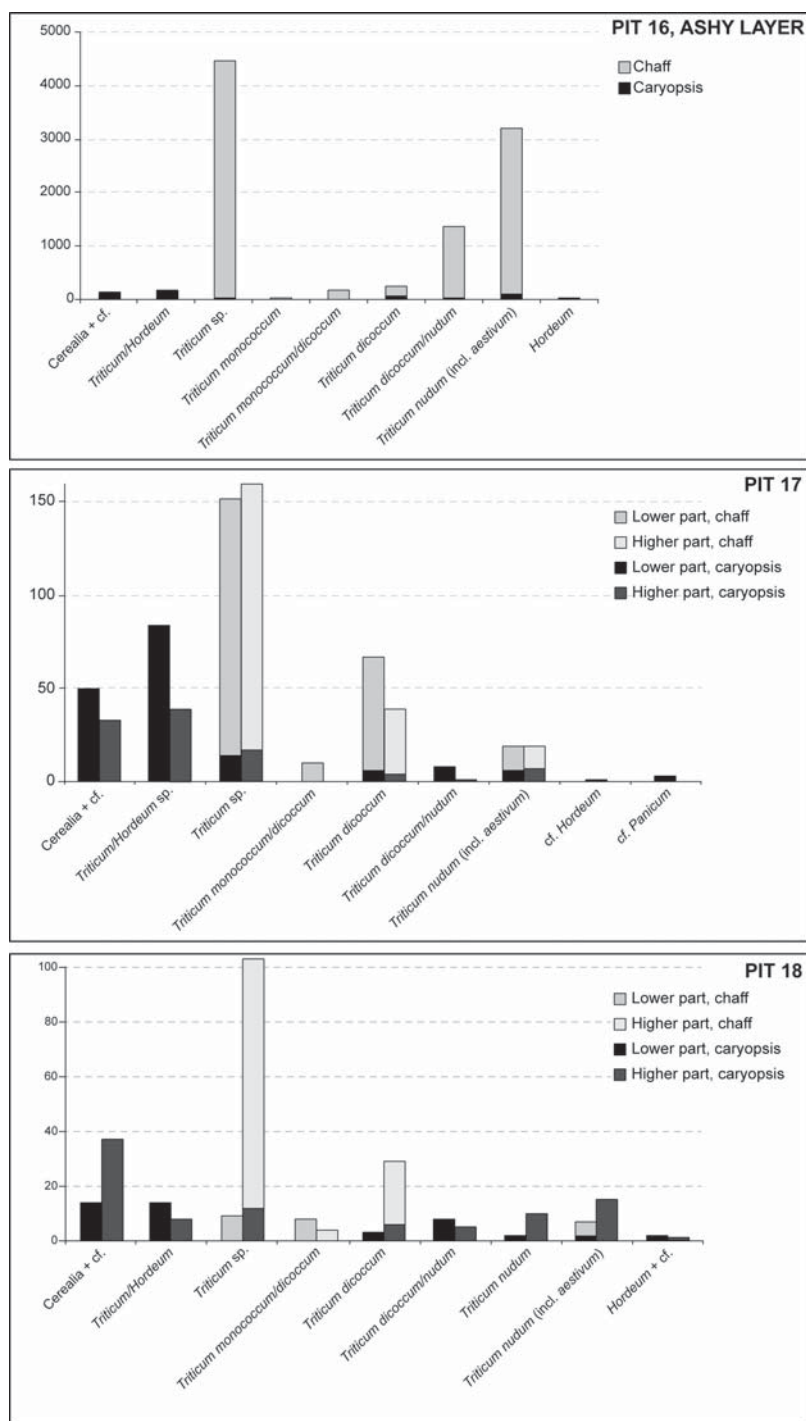


Fig. 65. Histograms showing the different proportions of cereals in Pits 16, 17 and 18, according to the number of caryopsis and chaff. For chaff, we took into account only spikelet fork and glume basis, estimating that one spikelet fork = two glume basis.

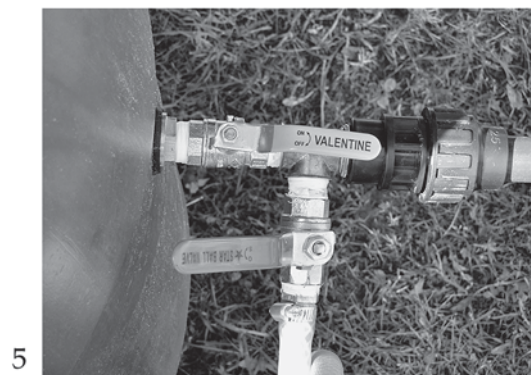
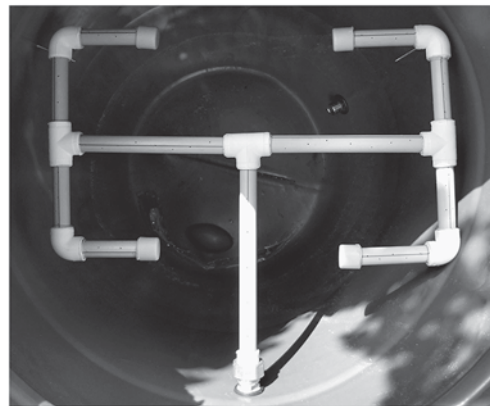
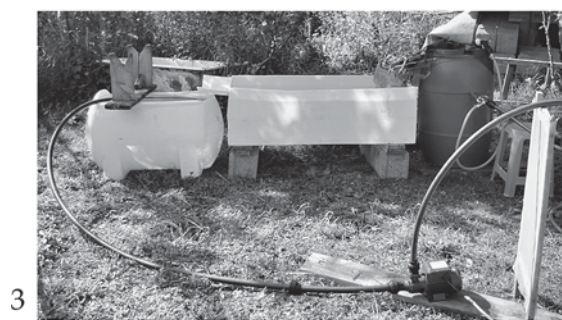
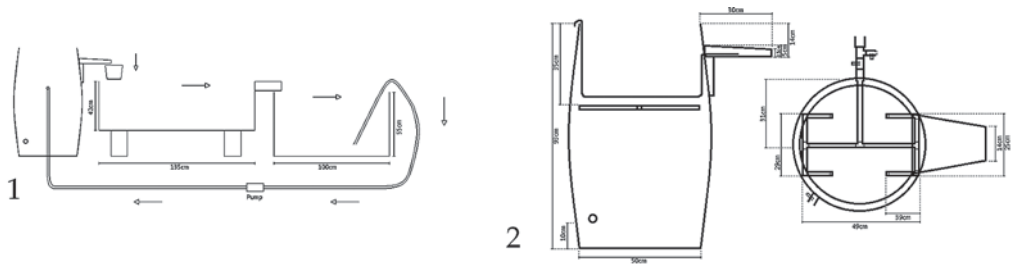


Fig. 66. 1 Side view diagram of flotation system used at Chobareti. Arrows indicate the direction of water flow; 2 Section and plan view of the main flotation tank; 3 Flotation system constructed at Chobareti; 4 Internal rose sprinkler of main barrel. The rose was constructed with eight 10 cm pipe lengths, two 20 cm pipe lengths, one 25 cm length, four elbow joints, three T-junctions and three end caps; 5 Water inlet to the main barrel and diversionary valve; 6 Attachment of the bucket and chifton to the main barrel.

Who hides behind the pots? A Reassessment of the Phoenician Presence in Early Iron Age Cos and Rhodes

Giorgos BOUROGIANNIS

Abstract

*This paper investigates aspects of the Phoenician presence on the islands of Rhodes and Cos during the middle and late Geometric periods. Discussion is based primarily on pottery wares although other groups of artefacts are also considered. Phoenician ceramic imports are examined alongside locally produced wares that display Phoenician traits. Hybrid pottery classes that draw from the free mixture of Phoenician and local trends, sometimes occurring through the borrowing across different groups of objects and material, are also included in the discussion. This study outlines a complex pattern of contacts between the two islands and the Phoenician world from the ninth to the early seventh centuries BC. The chronological assessment of this phenomenon argues for shifting degrees of influence from Phoenicia, better attested during the late Geometric period.**

Introduction

The Early Iron Age¹ marks one of the most dramatic and stimulating periods in the history of the Aegean, an era of significant revolutions in the social, political and economic spheres. (Proto)-geometric Greece emerged from the debris of the Late Bronze Age palaces,² following a prolonged period of complex changes. This transition from a glorious past to a less monumental present was, however, neither smooth nor straightforward. The loss of older socio-economic mechanisms involved the abolition of a coherent system of values, norms and habits, inducing feelings of uncertainty and insecurity, especially in its earliest stages. Yet at the same time this served as an agent for necessary change and evolution, impelling the replacement of systems that were no longer valid or in use. Lacking the old centres of power, society was forced into a gradual transformation that, in spite of its initial harshness, generated new dynamism and shaped a new network of values, perceptions and social hierarchies.

* I am grateful to Dr Francisco Nuñez for his constant help and for so generously sharing his expertise with me. My warmest thanks are also due to Dr. Thomas Kiely for proofreading my manuscript, as well as to the 22nd Ephorate of Cos and Rhodes and the National Museum of Denmark in Copenhagen for permission to publish the photographs accompanying the text. A preliminary version of this paper was presented at “Le VII^{ème} congrès international des études phéniciennes et puniques” (Hammamet, 10–14 November 2009).

¹ Coldstream 2003; Lemos 2002; Dickinson 2006; 2009; Langdon 2008.

² On the collapse of palatial society in Late Bronze Age Greece, see Middleton 2010.

Contacts with the rest of the Mediterranean were also affected by the demise of the Mycenaean palaces, since it was through them that access to the intra-Mediterranean exchange mechanisms was perceived and organised.³ This recession, caused by a marked decline in communications, was one of the most dramatic economic symptoms of the Early Iron Age Aegean. Maritime travels became less frequent in comparison with Mycenaean antecedents though they were not entirely interrupted. Our improved understanding of the period, corroborated by new excavations and studies, tends to dispel older perceptions of a complete Aegean isolation.⁴ Archaeological evidence clearly suggests that certain areas suffered lightly compared to others from the collapse of the Mycenaean palace civilisation. Such regional heterogeneity did not necessarily reflect disparate levels of competency amongst parts of the Greek world but should rather be attributed to geographic factors. Access or proximity to major intra-Mediterranean sea-routes was, in this respect, pivotal. It induced dynamism, facilitated external contacts and accelerated the re-establishment of regular exchanges, particularly with the east Mediterranean. Euboea, Crete and the Dodecanese are the three most commonly used paradigms of such strategically located entities, included in almost every discussion of contacts with the east. Yet unlike the commercial initiative of the Euboeans,⁵ which consolidated the island's position in these exchange mechanisms, evidence from Crete and the Dodecanese implies a passive participation in the process and a receptive disposition towards external influence.⁶ In their case, the foreign instigator of contact should be sought.

In the absence of the old centres of economic authority, the Aegean was a large navigable space, open to entrepreneurial initiative.⁷ Sea trade was enlivened and exchanges flourished, particularly from the tenth century BC onwards, as the result of smaller-scale and hence more flexible patterns of commercial mobility. The main foreign instigators of this evolution were the Cypriots and the Phoenicians, skilled seafarers whose mercantile activity also encompassed Early Iron Age Greece.⁸ The nature of their presence, as well as their contribution to the commercial awakening of the Aegean, has been the focus of numerous recent studies that have considerably advanced our knowledge and understanding of interconnections in the ancient Mediterranean.⁹ These studies not only confirm the eminent role of the Phoenicians but also highlight the active engagement of Cyprus in the intra-Mediterranean ventures, especially during the eleventh and tenth centuries BC.¹⁰

³ Burns 2010; see also Pullen 2010. For an overview of trade between the Dodecanese and east Mediterranean: Benzi 2009.

⁴ Thomatos 2006, pp. 258–260.

⁵ Popham 1994; Boardman 2002; Lemos 2001; 2005.

⁶ For Crete in particular, Hoffman 1997; Jones 2000; Stampolidis and Kotsonas 2006. See also Stampolidis 2009.

⁷ Yasur-Landau 2010, p. 122: “The collapse of the palatial powers... was the perfect opportunity for the ambitious, aggressive aristocrats and their followers from other strata of the postpalatial society to engage in a variety of interregional interactions... Raiding, trading and settling — both peacefully and violently — along the land and sea routes between the Aegean and the Levant.”

⁸ For a recent overview of the Phoenician presence in Cyprus: Karageorghis 2008. For the ‘Cypro-Phoenician’ interaction and its ceramic attestation, Gilboa *et al.* 2008, pp. 131–133, 143–146, 157, 167–168.

⁹ Stampolidis *et al.* 1998; Stampolidis and Karageorghis 2003; Karageorghis and Kouka 2009.

¹⁰ Crielaard 1998; Kourou 2000; Gilboa *et al.* 2008; Maier *et al.* 2009, pp. 73–74.

What sort of Phoenicians in the Dodecanese?

Scattered along the southeast tip of the Aegean, the islands of the Dodecanese were crucial for contacts with the east Mediterranean. Rhodes in particular was the meeting-point of numerous sea-routes, an essential stopover for every vessel sailing from the east Mediterranean. Cos, further to the north, provided an important anchorage, due to its regular coastline, fertile soils and proximity to the Anatolian landmass. Both islands offer valuable evidence in favour of an active and gradually increasing eastern presence, mainly engaged in commercial activities. The consideration of their material records is useful in two ways: it delineates their common features as well as their dissimilarities in regard to their eastward connections, and it leads to a better understanding of how such contacts were gradually developed and organised on a more systematic basis. From the opposite perspective, the absence of east Greek pottery imports to Cyprus and the Levant prior to the seventh century¹¹ emphasises the commercial passivity of the islands, leaving their eastward overseas contacts open to external initiative.

The earliest indication of resumed connections with the east dates to the advanced tenth century BC and points in the direction of Cyprus as the main agent for this recovery. In spite of the unimpressive volume of imports,¹² the Late Protogeometric and Early Geometric ceramic production of Cos and Rhodes is marked by a strong Cypriot influence that delineates at least some regularity in contacts between the two areas.¹³

Cypriots were of course not alone in this enterprise. The Phoenicians certainly played a prominent role and were actively involved in the interplay, although in the case of the Dodecanese they seem to have actually followed rather than preceded the Cypriot initiative. Rhodes in particular forms an exceptional case of possible Phoenician presence, traceable in the island's material evidence and further reflected in ancient literary sources.¹⁴ Things may look less promising when viewed from the neighbouring island of Cos, which lacks an equally clear Phoenician signature (if a clear Phoenician signature exists at all in the Early Iron Age Aegean).

The term 'Phoenician' has been the source of much perplexity since antiquity. 'Canaanites' was what the Phoenicians actually called themselves, leaving the use of the peculiar Greek word *Φοίνικες* to its overseas inventors.¹⁵ The latter was thus an externally imposed designation, subject to ambiguity and uncertainty, even more so since the Phoenicians did not agonise about their collective self-identification but would most likely have referred to themselves by city.¹⁶

¹¹ For a review of the sequence of early Greek pottery exported to the east Mediterranean, see Sørensen 1997; Crielaard 1999; Coldstream 2008. See also Coldstream 2009.

¹² Laurenzi 1936, p. 163, no. 6, fig. 149.

¹³ Coldstream 1968, p. 264; 2003, pp. 45–46; Desborough 1972, pp. 174–175; Bisi 1987, p. 235; Kourou 2003, p. 250; Bourogiannis 2012b.

¹⁴ Bunnens 1979, pp. 152–153, 187–188, 207–208; Lipiński 2004, pp. 146–149. See also Guzzo 2008–2009. The distant memory of a Phoenician presence on the island is also hinted in the *Chronicle of Lindos*: Kadmos offered a lebes inscribed with Phoenician letters to the sanctuary of Athena (Higbie 2003, pp. 70–72).

¹⁵ Aubet 2001, pp. 6–13.

¹⁶ Sherratt (2005, p. 35) argues that the Phoenicians identified themselves as the inhabitants of individual cities rather than collectively; this is also the way the Bible predominantly sees them. See also Morris 1992, p. 130; Burkert 1992, p. 28; Röhl 1992, p. 93.

The Homeric epics, accredited with the first textual reference to the term, puzzlingly make use of the specific ‘Sidonians’ alongside the generic ‘Phoenicians’. This is a rather unexpected choice at a time when the most powerful Phoenician city was Tyre, not Sidon. The *Iliad* and *Odyssey* are of course literature¹⁷ and hence subject to a more fluid interpretation of their current historic environment. The primary role of the Phoenicians, whose depiction is not identical in the two epics, was to promote the narrative rather than to provide an accurate ethnography. Their significance, however, is evident, not least because the *Iliad* and *Odyssey* provide the earliest Greek textual guide to the interaction between Greece and the east. This explains why Homer’s contradictory picture of the Phoenicians has been thoroughly analysed¹⁸ in an attempt to seek the kernel of historic truth that lies within the poetic narrative.

Notwithstanding its historic reliability and even though the Phoenicians are the most “conspicuous representatives of the eastern Mediterranean”¹⁹ in the two epics, the Homeric use of the term testifies to a Greek perplexity over Phoenician identity.²⁰ Homer’s references to ‘Phoenicians’ seem to embrace a wider range of people living along the Levantine littoral. Those people were engaged in certain recognisable activities related to sea-trade, and appear equally skilful in their maritime ventures as they do in craftsmanship, looting and piracy.²¹ What this composite picture reflects is the Greek perception of the Phoenicians in the late eighth to early seventh centuries BC. The contradictory qualities ascribed to them echo a particular (and thus insufficient or partial) acquaintance with them in Aegean waters that gradually shaped an idiosyncratic and rather simplistic Greek vision of ‘Phoenician identity’.²²

A similar confusion often surrounds the archaeological definition of the Phoenician presence in the Early Iron Age Aegean. The term has been used without distinctions for all imports from the Levantine coast as well as sites further inland.²³ In the absence of adequate material evidence, particularly for the earliest stages of the Iron Age, archaeologists were often left moving between Phoenicians, Syrians, Cypriots and Euboeans, with all plausible interpretations largely resting upon one’s focus or point of reference. Under its generic use, ‘Phoenician’ appears synonymous to *oriental*, a label in itself ambiguous and problematic.²⁴ This almost simplistic assumption

¹⁷ De Jong 1995.

¹⁸ For the Homeric portrayal of the Phoenicians: Muhly 1970; Crielaard 1995, pp. 224ff.; Latacz 1990; Winter 1995; Sherratt 2005, pp. 35–36; Gunter 2009, pp. 53–55, 61–70; Sommer 2010, pp. 115–119.

¹⁹ Crielaard 1995, 227.

²⁰ Aubet 2001, p. 9: “All this indicated the difficulties the Greek world found in drawing up an ethno-political definition of the Phoenicians.”

²¹ Niemeyer 2005, p. 17: “For the Greeks, they (Phoenicians, Aramaeans and other Syrian and Levantine people) all came along under the same flag, inscribed with only one cumulative name: *Φοίνικες*”; Sommer 2010, p. 118: “The *ethnikon* ‘Phoenicians’ may have meant, at that stage, little more than sailor merchants, who brought exotic goods, who spoke an exotic language and who behaved in exotic ways.”

²² Sherratt (2005, p. 35) views the Homeric composite depiction of the Phoenicians as an indication of an encounter in the Aegean rather than in the Phoenician homeland, happening due to Phoenician rather than Greek or Euboean initiative. As Hodos (2006, p. 25) has put it, “Greeks used the term *phoinikes* to generalize about all eastern maritime merchants, rather than to specify a particular city-state, much less an ethnic, linguistic or cultural group.”

²³ For the use and misuse of the term ‘Phoenician’ in the early Iron Age Aegean, see Kourou 2000, p. 1076; 2008b, pp. 307–308. For a comprehensive overview of the Phoenician presence in the Aegean in the Early Iron Age and subsequent periods: Lipiński 2004, pp. 145–188.

²⁴ This ‘oriental’ approach to the Phoenicians has been recently discussed — and questioned — by Gunter (2009). See also Gubel 2006. For a view from the occident: Riva 2010, pp. 46ff.

of what is Phoenician²⁵ has been based on two facts: the incomplete knowledge of Levantine artistic centres, which did not permit a secure distinction between different groups of imports (especially within the patchy and disparate archaeological record of the Aegean), and the premise that the Phoenicians were the primary, if not the only instigators of maritime commercial activity in the east Mediterranean during the Early Iron Age.

Although our knowledge of eastern imports has advanced considerably in the past decades, the Phoenicians are still postulated as the principal carriers of oriental objects in the Aegean, regardless of their precise place of manufacture.²⁶ This tendency has sometimes resulted in erroneous provenance designations for certain categories of imports. This is the case for Black-on-Red pottery, which often gets referred to as *Phoenician* or *Cypro-Phoenician* ware.²⁷ Even though the Phoenician prominence in preserving (or re-opening) the Early Iron Age trans-Mediterranean routes is of course indisputable today,²⁸ so is the complexity and plurality of ancient trade. Recent studies have highlighted the participation of Cypriots and Euboeans in the trade ventures, raising the question of cooperative patterns of commercial mobility and expansion.²⁹

Defining the Phoenician presence in the Early Iron Age Aegean is therefore an intricate archaeological task that involves consideration of at least two problems: the correct identification of imported Phoenician objects, and the assumption that oriental imports were carried primarily by Phoenician traders. The second aspect is of course the more composite and harder to resolve on a mere archaeological basis. Even though the intricacy of ancient trade allows diverse theoretical approaches and multiple interpretations, the examination of objects appears more focused and straightforward.

With pottery in particular we are on safer ground. In spite of its regional heterogeneity, Early Iron Age Greece shared a distinctive ceramic identity. The various Protogeometric and Geometric pottery styles,³⁰ diverse yet at the same time homogeneous, offer a consistent manifestation of a coherent material culture, in which imports are easy to detect. Our extensive knowledge of Aegean Early Iron Age pottery, of its development, interaction and relative sequence, usually permits secure chronological as well as typological assessments.³¹ This sound classification system offers a tangible tool for the comparative study of other — non-Aegean — ceramic styles when these are found in association with Aegean wares. It also enables us to reconstruct with considerable precision not only the patterns of production, but also the processes and contexts of ceramic consumption. In addition, the single and in most cases undisturbed burials of the Coan and Rhodian cemeteries function as sealed chronological units, and thus form an excellent and reliable framework within which any potential ‘orientalia’ can be examined, securely dated and further analysed.

²⁵ This tendency has been severely criticised by Boardman 2005, pp. 284–286; 2006, pp. 198–199.

²⁶ Notice that the considerably improved ability to distinguish between different places of manufacture has also been disregarded as unnecessary in some cases; Fletcher 2006, p. 187: “What, after all, is the difference between a north Syrian and a Phoenician? Both are artificial constructs. It is also clear that the division continues to cause confusion among modern scholars about whether to separate these two groups or keep them as one, which is why we usually talk of ‘Levantines’ rather than ‘Phoenicians’ and ‘north Syrians’.”

²⁷ For the misleading *Cypro-Phoenician* term, see Iacovou 2004. Bouragiannis 2012a; Kotsonas 2012.

²⁸ Niemeyer 2003; 2004, pp. 45–48; 2006.

²⁹ Kourou 2002; Boardman 2006.

³⁰ Desborough 1972; Coldstream 1968; Lemos 2002.

³¹ Although there is always space for new approaches, the Aegean relative and absolute chronologies have remained basically unchallenged. See Brandherm and Trachsel 2008.

Consequently, although pottery was an unassuming commodity of ancient commerce, it is primarily those ceramic assemblages which provide us with most of the well-dated and securely identified evidence of contacts between the Aegean and the east.³²

In search of Phoenicians in Middle Geometric Cos: the pottery evidence

When compared to Rhodes, Cos appears marginal and conservative, and up to a certain point it was. Yet this provinciality did not have a negative effect on the island's archaeological record. Cos has yielded the most complete sequence of geometric burials in the southeast Aegean,³³ providing an excellent point of reference for the study of the Early Iron Age in this region. According to currently published evidence, the latest stages of the style are not represented at Cos, where examples reach only to midway through the equivalent Rhodian Late Geometric sequence. This lacuna was marked by the absence of bird-kotylai and Protocorinthian aryballoi,³⁴ suggesting a *terminus ante quem* that can be dated to *ca.* 710 BC.³⁵ Recent publications,³⁶ however, go some way towards bridging this gap. In addition, the discovery of a major burial ground at Marmaroto, on the outskirts of the town, where the earliest pottery is Sub-Geometric, testifies to continuity of evidence from the island, portraying Cos as an expanding polis that excluded — as was the norm — the dead from its central area.³⁷

Yet my principal interest here goes beyond the local ceramic sequence. I will endeavour to discuss the eastern elements traceable in the local ceramic record and then to investigate in more detail the Phoenician aspect of this influence.

With a few noteworthy exceptions, Phoenician fine ware was not particularly popular in the geometric Aegean³⁸ and Cos fits perfectly with this rule. Searching for Phoenician pottery in the Coan burials leads to discouraging results, simply because no such imports have been reported to date. Phoenician fine ware is therefore completely absent from the island. Although one might associate this with the fortuitous factors that accompany archaeological research, the major geometric cemeteries of the island have been thoroughly excavated and, luckily, published, producing a reliable picture of the Coan archaeological record for that period. Clearly, the absence of Phoenician pottery imports does not mutually exclude the presence of Phoenician traders. While Cos has produced a modest and disparate corpus of orientalia³⁹ that could function as an indication of such presence, certain aspects in the local pottery production also indicate a Phoenician influence which, though minor, nevertheless implies an existing relationship with the Levant.

³² For a Levantine perspective of the (mis-)use of pottery evidence, Whincop 2010.

³³ Morricone 1978.

³⁴ Coldstream 1968, pp. 287–288. These two shapes, especially the Protocorinthian aryballoi, mark the end of the Geometric style in Rhodes.

³⁵ This is the date to which Morricone (1978, p. 50) ascribed the latest Geometric burials of Cos (Fadil III and S. Pantaleo I). Coldstream (2003, p. 252) agrees with this attribution.

³⁶ Skerlou 2001.

³⁷ Coldstream 2003, p. 399.

³⁸ For a comprehensive overview of the Phoenician pottery imports in Early Iron Age Aegean, Kourou 2008b; see also Kourou 2008a.

³⁹ These mainly consist of a handful of faience amulets and disc-shaped faience beads.

The first eastern pottery imports in the Coan cemeteries date to a fairly early stage of the Middle Geometric.⁴⁰ They are all products of Black-on-Red (BoR) ware and are clearly of Cypriote manufacture.⁴¹ These imports display a persistent predilection for the small globular juglet with neck-ridge and funnel-shaped mouth, a shape which is largely standardised due to its specialised usage as a scented-oil container. Although only five out of around 20 Middle Geometric Coan burials produced such imports (and even those ones in moderate numbers) the new shape had a considerable impact on the local Middle Geometric production. It was extensively copied, developing into the most popular, and actually *the only* widely produced closed vessel of the local repertoire. These Coan small lekythoi closely imitated the shape of their Cypriote prototypes, yet local potters usually opted for the linear, rather uninspired and repetitive decoration system that was in use on the island.⁴² More infrequently, the Coan geometric idiom of the locally produced neck-ridge lekythoi was replaced by horizontal stripes and groups of small concentric circles,⁴³ demonstrating a strong influence of the Cypriot decorative system, albeit in a less accurate and disciplined form.

The influx of eastern and more specifically of Cypriot influence in the Middle Geometric pottery of Cos (as well as that of Rhodes), which was largely induced through BoR imports, has been linked to Phoenician trading activity in the area.⁴⁴ Even though the possibility of a Phoenician engagement in the circulation of BoR remains a valid hypothesis, there is no obvious justification to support the disassociation of BoR from the commercial role of Cyprus.⁴⁵ This ware is now more firmly established as a Cypriot product,⁴⁶ whereas its occurrence at Levantine sites is increasingly seen as representing a Cypriot import and is often attributed to Cypriot commercial initiative.⁴⁷ For all these reasons, BoR imports are excluded from the current discussion of Phoenician evidence. Furthermore, Coan Middle Geometric production is marked by a predilection for two shapes with strong Cypriot connotations: the bird askos, with wings plastically modelled each side of the elongated body, and the lentoid flask. Both types were most possibly introduced (or reintroduced) from Cyprus in the late tenth to early ninth century BC. Overall, the eastern impact on the ceramic production of Cos during the ninth and the first half of the eighth century is principally Cypriote in character, as is the provenance of the imported pottery from the Middle Geometric burials.

So are the Phoenicians totally invisible in the Middle Geometric ceramic record of Cos? The answer to this question is ‘most probably not.’

The rich tomb V of the Pizzoli plot is dated to the early eighth century BC on the basis of a small, pedestalled krater⁴⁸ that follows Attic Middle Geometric II prototypes.⁴⁹ This single burial produced

⁴⁰ Coldstream 1982, p. 268.

⁴¹ Bourogiannis 2000.

⁴² For example, Morricone 1978, figs. 20–23, 25–30.

⁴³ Morricone 1978, fig. 24, fig. 859.

⁴⁴ Coldstream 1982, pp. 268–269; 1998; 2006, pp. 50–51.

⁴⁵ Bourogiannis 2000, p. 18; 2009, pp. 121–122. Bisi (1987, p. 235) was amongst the first scholars to connect the presence of BoR in the Dodecanese with Cypriot rather than Phoenician commercial activity.

⁴⁶ Schreiber 2003; Bourogiannis 2008. See also Smith 2009, pp. 188–189.

⁴⁷ Gilboa and Sharon 2003, p. 67; Aubert and Nuñez 2008, pp. 94–95 (where the Phoenician morphological aspects of the ware are also stressed); Lehmann 2008, p. 223; Gilboa *et al.* 2008, p. 155; Bourogiannis 2008, pp. 471–478.

⁴⁸ Morricone 1978, p. 307, figs. 656–657.

⁴⁹ Coldstream 1968, pl. 5f. The shape became popular towards the end of the Middle Geometric period, especially in Rhodes, which displays a more vigorous Atticising style (Coldstream 1968, pp. 269–270). When compared to the

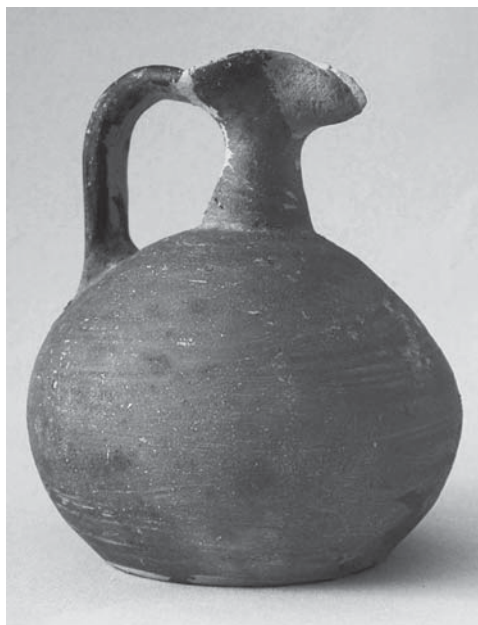


Fig. 1.

a bizarre trefoil-lipped jug (Fig. 1), coated in a rough red slip.⁵⁰ The pale orange colour of the clay (7.5YR 7/4) and the micaceous fabric suggest a local manufacture. Yet the heavy proportions of this rather ungainly vase, the short sloping neck, the emphasis put on the high trefoil rim and the red slip fully covering the surface, are all alien to the norm of the local pottery. Although not a meticulous copy, the morphological and technical aspects of the jug from Cos suggest a conscious attempt to reproduce the visual impression of Phoenician Red Slip jugs and have no relation whatsoever to any known form of the Aegean ceramic milieu. One has indeed to go no further than Cyprus, with which Cos was certainly linked in the Middle Geometric period, to find a concrete presence of Phoenician Red Slip trefoil-mouth jugs during the ninth and eighth centuries BC.⁵¹ The closest parallels for the Coan vase are identifiable amongst types of Phoenician jugs ascribed to Bikai's 'Salamis Horizon',⁵² which dates between *ca.* 850 and 750 BC,⁵³ hence in perfect agreement with the chronology of the Coan tomb.

Although Phoenician trefoil-lip jugs are rare in the Aegean,⁵⁴ they form one of the most iconic ceramic manifestations of the Phoenician expansion in the Mediterranean.⁵⁵ Noticeably, tomb V

Coan example, Rhodian Middle Geometric II kraters (Coldstream 1968, pls. 59g, 60e) are more advanced and should be placed later in the sequence.

⁵⁰ Morricone 1978, p. 306, fig. 658.

⁵¹ Bikai 1987, pls. XIV–XVI.

⁵² Bikai 1987, pp. 31–32, no. 379, pl. XIV; p. 32, no. 383, pl. XVI (Salamis Horizon, 850–750 BC).

⁵³ Bikai 1987, pp. 62, 69.

⁵⁴ Coldstream and Catling 1996, fig. 146, pl. 236, no. 80; Hoffman 1997, pl. 46; Kourou 2008b, p. 312, fig. 2:2.

⁵⁵ Maaß-Lindemann 2005; Fletcher 2006.

of the Pizzoli plot is also among the first burials in Cos to have produced imported BoR ware,⁵⁶ so that the appearance in the same group of material of a Phoenician-influenced vessel has to be noted. The Phoenician shape had a minor impact on local pottery, traceable to a small group of Middle Geometric Coan oinochoai with squat-globular bodies and decoration of cross-hatched or multiple triangles.⁵⁷

When it comes to non-pottery evidence of Phoenician (or possibly Phoenician) connotation, the results are, once more, neither particularly encouraging nor self-evident in their interpretation. Two small faience amulets, measuring between 4 and 4.5 cm were found in two different Middle Geometric burials at Cos. The first one portrays a seated double-flute player.⁵⁸ The amulet was found in an important tomb of the Serraglio cemetery (tomb 27) that marks the beginning of the Middle Geometric style on the island. The tomb also contained a most possibly Euboean Sub-Protogeometric IIIa skyphos,⁵⁹ together with the earliest example of a Cypriote-style neck-ridge juglet produced in Cos.⁶⁰ The second amulet, only partly preserved with a very worn surface, portrays a seated female figure, possibly Isis nursing Horus, and comes from a burial context of an advanced Middle Geometric — if not Late Geometric — style at Amaniou in central Cos.⁶¹ The figurine bears a nonsense inscription on the back.

Whether or not these two objects should be regarded as Phoenician products is hard to tell, yet they definitely offer an additional Levantine element to the Coan Middle Geometric horizon. The intriguingly mixed character of tomb 27, with a possibly Phoenician amulet, a Euboean skyphos and a Cypriot-inspired juglet, perfectly outlines the three most commonly discussed initiators of commercial interplay in Early Iron Age Aegean.⁶² The coexistence of those elements in the same Coan context reflects the difficulties that affect any attempt to interpret the intricate commercial aspects of a rather patchy material record.

A view from Early and Middle Geometric Rhodes

The scarcity of indisputably Phoenician elements in the ceramic sequence of the ninth and early eighth centuries is not confined to Cos. Early and middle geometric burials in Rhodes have produced no Phoenician pottery imports so far, and local production displays no distinguishable signs of a Phoenician (or Phoenicianising) influence. On the contrary, evidence indicates a primarily Cypriot component in the island's eastward connections. This is noticeable on imports of White Painted and, later on, of BoR ware and further corroborated by a strong Cypriot influence in local production.⁶³ Within this context of eastward contacts directly or indirectly reflected in the ceramic corpus of Rhodes, occurrence of other 'orientalia' is incoherent and difficult to interpret. One of

⁵⁶ Morricone 1978, p. 305, figs. 653–655.

⁵⁷ Morricone 1978, p. 209, fig. 407; p. 360, fig. 780; p. 390, fig. 866.

⁵⁸ Morricone 1978, p. 197, fig. 378.

⁵⁹ Morricone 1978, p. 203, fig. 394. Compare Popham and Lemos 1996, pl. 100, Pyre 14.1, 3, 8.

⁶⁰ Morricone 1978, p. 205, fig. 400.

⁶¹ Morricone 1978, p. 373, figs. 812–813.

⁶² This coexistence of Phoenician, Cypriot and Aegean (chiefly Euboean) elements is attested throughout the Mediterranean. For a western Mediterranean example, see González de Canales *et al.* 2009, pp. 12–13.

⁶³ Bourogiannis 2009, pp. 114–118.

the most intriguing groups of material for this period consists of three faience objects from tomb 43 at Marmaro-Ialysos, dating to the early ninth century BC: a small figurine portraying Bes, a disc-shaped amulet and a triangular seal decorated with incised panthers on its base.⁶⁴ Notably, the same burial has produced the first White Painted imports to be found in Rhodes,⁶⁵ displaying an interesting coexistence of Cypriot pottery imports and other orientalia possibly of Phoenician origin. Marked by an astonishing paucity of evidence, the Middle Geometric period is even less promising and has hitherto produced no indication that can be safely related to a Phoenician presence on the island. Nevertheless, the complete absence of finds that can be securely ascribed to the Middle Geometric I clearly indicates our insufficient knowledge of this phase in Rhodes and the possibility of a future reassessment of our current interpretations.

Discussion so far has attempted to identify possible Phoenician facets in the pottery of Cos and Rhodes during the ninth and early eighth centuries BC. In the complete absence of imports, observations are confined to indirect indications of a minor and rather inconsistent Phoenician influence on the local production. Given the scarcity and disparity of the existing data, there is little scope for the secure evaluation of an unsatisfactory archaeological record. In this context concluding remarks can be ambivalent and hard to reach. Evidence related to contacts between the southeast Aegean and the east during this period is principally of Cypriot character. Notwithstanding the noticeable dearth of actual imports, the impact of Cyprus on the early and middle geometric pottery of Cos and Rhodes is almost unparalleled in the Aegean (with the possible exception of Crete) and can only be understood as a sign of an existing connection between the two areas. Phoenician elements at the same time are also existent yet irregular and less influential.

Phoenician elements in the Late Geometric pottery of Cos: first steps towards new transformation

Transition to the second half of the eighth century (Late Geometric in the Aegean parlance) is accompanied by a gradual change in the previous situation. Evidence increases in both quantity and diversity, offering a more complete picture of the changes in and nature of eastern contacts, their intensity and, up to a certain point, their participants. The Phoenician component becomes clearer, displayed in a more concrete material manifestation. In addition, the archaeological record is no longer limited to burials but at least in the case of Rhodes also encompasses the island's sanctuaries, which functioned as major hubs of exchange and commercial interaction.

Evidence in Cos is, again, rather modest and less diverse. The exceptionally well-furnished tomb 14 at Serraglio⁶⁶ marks the hesitant transition of Coan pottery to its Late Geometric style. The tomb produced an impressive number of vases morphologically related to Cyprus, such as neck-ridge lekythoi, bird askoi and flasks,⁶⁷ arguing for the strong Cypriot influence on the pottery of Cos *ca.* 740 BC.

⁶⁴ Laurenzi 1936, p. 164, nos. 13–15.

⁶⁵ Laurenzi 1936, p. 163, no. 6, fig. 149.

⁶⁶ Morricone 1978, pp. 94ff.

⁶⁷ Morricone 1978, figs. 143–177, 205–213, 216–223.

It is during the same period that the first Coan imitations of BoR ware appeared,⁶⁸ following a considerable increase in actual imports. This new trend initially focused on the popular shape of the neck-ridge juglets, placing particular emphasis on achieving the lustrous red surface and the disciplined decoration of the Cypriot originals. Yet the early meticulousness was soon replaced by more flexible (or less disciplined) copying mechanisms, into which local shapes were also integrated.⁶⁹

Coan imitations of BoR first occurred in a ceramic setting that was strongly influenced by Cyprus in morphological, decorative, as well as technological aspects. Phoenician features were also integrated into this process, contributing to the regeneration of the local Late Geometric style. Despite the remarkable absence of Phoenician imports from the island's Late Geometric ceramic assemblages, local production displays indirect signs of an increasing Phoenician influence. This is evident particularly amongst some of the latest tombs of Cos, dated to *ca.* 720–710 BC, which yielded an undecorated version of the imitated BoR ware. The surface of this small group of vases,⁷⁰ fully coated in a thick reddish slip, is completely foreign to the Aegean tradition and illustrates a strong relationship with the Phoenician Red Slip ware. Even though no imported Red Slip vases are so far reported in the Dodecanese, the ware is documented in the Aegean, in Euboea and especially in Crete.⁷¹

The manufacture of Red Slip vases in Late Geometric Cos adds a clear, albeit indirect, Phoenician testimony to the material record of the island and hints at the Levantine presence in the southeast tip of the Aegean. The close association between these vessels and the locally produced imitations of BoR indicates that this new tradition must have reached the island *from* or *via* Cyprus. The typological assessment of these products is not always straightforward, for they display a tendency towards stylistic improvisation, or they only portray implicit hints of Phoenician taste. The shape of oinochoe 1011 from Serraglio tomb 64,⁷² for example, (Fig. 2) stands very close to the BoR II globular jugs of Cyprus,⁷³ but the rendering of the neck, which is narrower at its bottom and broader towards the rim, is reminiscent of Phoenician jugs of the Red Slip ware.⁷⁴ Other vases, however, display a more concrete morphological connection with the Phoenician pottery repertoire. This is the case for an oinochoe from the Late Geometric cremation D at Kardamaina on the south coast of Cos (Fig. 3).⁷⁵ Its spherical body, narrow ring foot, high pinched rim and slightly sloping neck portray the influence of Phoenician Red Slip jugs, particularly of types attributed to Bikai's 'Salamis' and 'Kition' Horizons,⁷⁶ and thus dating to the second half of the ninth and the eighth century BC.

These indirect Phoenician elements were largely confined to products of the locally produced BoR or Red Slip groups, with signs of their dissemination in the local geometric taste being rather

⁶⁸ Bourogiannis 2000, pp. 15–16.

⁶⁹ Morricone 1978, pp. 232–233, figs. 468–471.

⁷⁰ Morricone 1978, figs. 425, 428, 567, 570; Skerlou 2001, fig. 30.

⁷¹ Kourou 2008b, pp. 309–312. Stampolidis 1998, pp. 181–182, nos. 184–186.

⁷² Morricone 1978, p. 271, fig. 567.

⁷³ Gjerstad 1948, fig. XXXIX, 2.

⁷⁴ Compare the neck of the jug in Bikai 1987, no. 360 (pls. XIV, XXVII): Salamis Horizon, *ca.* 7850 to 750.

⁷⁵ Skerlou 2001, p. 272, fig. 30.

⁷⁶ Bikai 1987, nos. 370, 379, 402.



Fig. 2.



Fig. 3.

exceptional. A small trefoil-lipped juglet (inv. 741) decorated with zones of dots on the shoulder⁷⁷ (Fig. 4) was found in tomb 43, one of the most prolific Late Geometric ceramic assemblages of the Serraglio cemetery and a principal source of local BoR imitations.⁷⁸ Although of local manufacture,⁷⁹ both its shape and decoration are unparalleled in the Coan Late Geometric repertoire.⁸⁰ Certain morphological features such as the almost spherical body, the narrow and slightly sloping neck, as well as the high pinched rim seem to stem from types of the Phoenician rather than the Aegean repertoire. The small juglet from tomb 43 may thus be regarded as a peculiar freer improvisation of the Coan Late Geometric production that is nonetheless related to trefoil-lipped Phoenician jugs of the Red Slip ware.⁸¹

Our incomplete knowledge of the Coan Late Geometric II and early archaic contexts⁸² hampers a more precise appraisal of the Phoenician presence in the island during those periods. The single

⁷⁷ Morricone 1978, p. 233, fig. 472.

⁷⁸ Morricone 1978, figs. 463–471.

⁷⁹ Fine orange (7.5YR 7/6) clay with silver mica.

⁸⁰ Morricone 1978, p. 233: “Il vasetto è unico per forma e decorazione.”

⁸¹ Bikai 1987, no. 382, pls. XVI, XXVII.

⁸² Despite the lack of a comprehensive publication, it is now clear that the Coan sequence does not end abruptly around 710 BC but continues uninterrupted into the seventh century, although the nucleus of evidence may have shifted from Serraglio to the outskirts of the town, in the area of Marmaroto (Coldstream 2003, pp. 253, 399). Some of the evidence from Kardamaina (Skerlou 2001) also seems to represent an advanced stage of the local Late Geometric style.

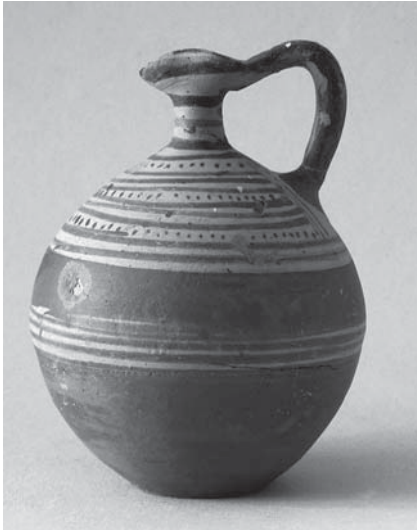


Fig. 4.



Fig. 5.

published example that can be ascribed to a seventh-century horizon is unfortunately the product of a disturbed burial. The locally manufactured mushroom-topped juglet (Fig. 5), clearly of Phoenician inspiration but bearing the characteristic banded decoration that was frequently used in archaic east Greece, was found in proximity to the Middle Geometric tomb B at the Serraglio cemetery of Cos.⁸³ This humble Phoenicianising vessel, which must be associated with some unknown early seventh-century group, provides us with a unique Coan indication for the increased Phoenician interaction in the area during the first decades of the seventh century, of which Rhodes displays a magnificent ceramic documentation.

These enhanced, albeit indirect, Phoenician indications in the ceramic record of Late Geometric Cos, particularly around 720 to 710 BC, are corroborated by other groups of material that also imply a more dynamic Levantine engagement; the strongest evidence was produced in the area of the Serraglio cemeteries. I will limit my discussion to two faience amulets portraying Egyptian deities. One of them was found in tomb III of the Fadil plot,⁸⁴ one of the latest Late Geometric assemblages of Cos. The amulet has been identified with Anubis (related to death and afterlife), although the head is that of a feline, making identification with Sekhmet or Bastet more satisfactory. A remarkable infant burial was excavated at the Sofos plot, Serraglio.⁸⁵ This important corpus of material, which still awaits full publication, is marked by the concrete presence of ceramic imports from Cyprus as well as locally produced imitations of Cypriot types. The suspected Phoenician engagement is possibly reflected in a faience amulet of Bes,⁸⁶ one of the most popular protective figures in the eastern Mediterranean.

⁸³ Morricone 1978, p. 393, fig. 878.

⁸⁴ Morricone 1978, p. 339, fig. 733.

⁸⁵ Papachristodoulou 1980.

⁸⁶ Papachristodoulou 1980, pl. 348a (first row, middle).

Notwithstanding the remarkable absence of Phoenician pottery imports from Late Geometric Cos, it is possible to outline the gradual transformation in the way eastern contacts are reflected in the island's material record in the second half of the eighth century BC. During this period, Cypriot imports continued to flow and to inspire local imitations in terms of shape, ornaments and fabrication. Towards the last decades of the eighth century, the Phoenician component becomes more clearly manifested, suggesting a more active Phoenician engagement in the ongoing exchange mechanisms. Our unsatisfactory knowledge of the latest stages of the Coan Late Geometric and archaic periods leaves little space for final conclusions and puts forward the need of future revisions. Yet a closer look at the Coan evidence seems to suggest that the island may not have been totally unaffected by the Phoenician cosmogony that Rhodes experienced during the same period.

Late Geometric Rhodes: The Consolidation of Phoenician Presence

Phoenician commercial activity, which in Cos is implied by an unsatisfactory and disparate archaeological record, has a more concrete material manifestation in the case of Rhodes. Transition to the Late Geometric brought a new impetus to the island's external contacts and strengthened Rhodes' links with the Levantine littoral. By the late eighth century BC this process reached its first peak, accelerating Rhodes' transformation into a major commercial hub of the Aegean, a vibrant meeting point of traders, goods and trends originating in the east. The new impetus, which was partly due to the increased maritime mobility of the Phoenicians in the eighth century BC, was further facilitated by the full establishment of the island's major sanctuaries at Ialysos, Lindos and Kamiros. These urban cult areas played an increasingly significant role by attracting and accommodating much of the island's overseas trade. Moreover, the formation of the three Rhodian city-states, nucleated around the sanctuaries, invigorated the island's internal organisation, resulting in a more effective and reciprocal participation of Rhodes in the exchange mechanisms. The economic vitality that Rhodes achieved in the eighth century also encompassed her maritime engagement, a fact that is reflected in the ancient literary sources. The memory of a considerable Rhodian naval power is preserved in Strabo's Book XIV:⁸⁷ the fleet already built by the Rhodians prior to the first Olympic Games in 776 BC is thought to be worth mentioning and is included in the narrative. Furthermore, Eusebius includes Rhodes in his list of ancient thalassocracies, a clear indication of the island's considerable fleet and maritime activity.⁸⁸

Imports of Phoenician Bichrome Ware

It is during this period of enhanced economic engagement that the earliest Phoenician ceramic imports occur in Rhodes. Tsambikos grave 132 (442) at Ialysos produced a mushroom-topped, neck-ridge flask with an almost spherical body and a narrow ring base, of Phoenician Bichrome

⁸⁷ Strabo, XIV.10.1.

⁸⁸ Konstantinopoulos 1986, p. 33; Forrest 1969, p. 105.

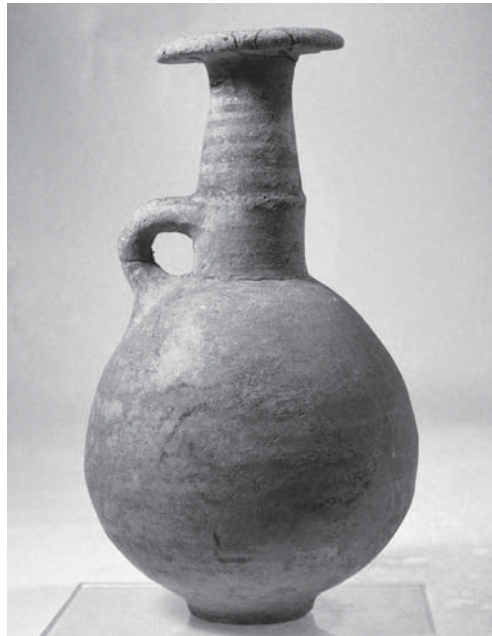


Fig. 6.

ware (Fig. 6).⁸⁹ The vase is of a porous pink (5YR 8/4) fabric with white inclusions and bears a thin orange (7.5YR 7/6–7/8) slip on the body and lower half of the neck. Its surface has been homogeneously smoothed and horizontally burnished. The upper part of the neck is decorated with two red bands and four black fillets in between. The top surface of the rim is painted red. The chief morphological features can be summarised as the reduced groove (rather than ridge) situated halfway up the neck, and the broad rim projecting horizontally. The neck displays a dual articulation, with an almost cylindrical lower half and a slightly conical upper part.

The typological evolution of this iconic Phoenician shape has been thoroughly studied⁹⁰ and received new attention in recent years as a result of the systematic excavations at Tyre-al Bass.⁹¹ The Phoenician mushroom-lipped jug developed from the pre-existing type of jugs with spherical bodies and ‘square-cut’ rims.⁹² The latter were typical of Tyre strata V–IV (al Bass III) as well as the second half of the ‘Salamis Horizon’ in Cyprus, suggesting that this particular variety gained its greatest popularity during the first half of the eighth century BC.⁹³ Phoenician jugs with square-cut

⁸⁹ Jacopi 1929, p. 144, no. 1, fig. 139 (inv. 11850). On the Phoenician provenance of the vessel: Johansen 1957, p. 163 n. 329; Coldstream 1968, p. 275 n. 7; 1969, p. 2; Papapostolou 1968, p. 90; Peserico 1996, p. 79 n. 52; Kourou 2008b, p. 319. Gjerstad (1948, p. 264 n. 4) on the contrary had erroneously ascribed a Cypriote provenance to the vessel.

⁹⁰ Chapman 1972, pp. 75ff., 153–155 (Neck-decorated and plain neck-ridge jugs); Bikai 1987; Anderson 1990; Doumet-Serhal 1993–1994; Peserico 1996; Lehmann 1996; 1998.

⁹¹ Nuñez 2004b, pp. 310–313; 2008. See also Whincop 2009, p. 129, class 085a, 085b, fig. 36.

⁹² Nuñez 2004b, p. 307, fig. 163, Type Ja 2; 2008, fig. 4, type c and pp. 49–58.

⁹³ Nuñez 2008, p. 83, fig. 33.

rims are, to the present day, unattested in the Dodecanese, where local production displays no signs of knowledge or familiarity with this Phoenician shape. Nevertheless, the type is not unknown in the Aegean, with a few examples excavated in Crete.⁹⁴

Phoenician mushroom-lipped jugs with globular body, of the same typological stage as the example from Tsambikos tomb 132 (442), are found in Tyre strata III–II, al Bass period IV and the so-called Kition Horizon in Cyprus, and can thus be dated to *ca.* 740–700 BC.⁹⁵ This shape is well represented in the earliest stages of Tyre-al Bass V and the Amathus Horizon of Cyprus,⁹⁶ confirming that its production continued well into the seventh century BC.⁹⁷

The Rhodian example is not one of those late occurrences of mushroom-lipped jugs with spherical body and should rather be associated with earlier phases of the type's production, which belong entirely to the eighth century BC. The chief chronological indicator of the Tsambikos tomb 132 (442) is unfortunately confined to a miniature skyphos, only 4 cm high, coated in black slip.⁹⁸ The vessel retains the conventional profile of skyphoi with shallow body and offset rim that first occur in advanced Middle Geometric Rhodian contexts and clearly imitate the Attic Middle Geometric II shallow skyphos with offset vertical lip.⁹⁹

The undecorated, fully slipped version of the skyphos from tomb 132 (442) is not unique. A similar, albeit larger, Rhodian example, coated in a reddish-brown slip, was found in tomb M of the Exochi cemetery.¹⁰⁰ Although it was classified as Middle Geometric,¹⁰¹ tomb M actually marks the transition to the Late Geometric style in Rhodes and dates to approximately 750/740 BC.¹⁰² The tomb also contained a deep-bodied kantharos¹⁰³ that foreshadows the Late Geometric Rhodian variety of kantharoi with straight walls, further corroborating the dating of the burial close to the beginning of the Late Geometric.¹⁰⁴ In addition, the kantharos from Exochi tomb M is lavishly decorated with birds and zigzags, in a style that is reminiscent of the 'Bird-and-Zigzag Painter' of Rhodes, ascribed to the earliest stages of the Rhodian Late Geometric.¹⁰⁵ Comparison of the skyphos from tomb 132 (442), which contained the Phoenician Bichrome flask, with its counterpart from tomb M at Exochi shows that the former has a better articulated offset lip and

⁹⁴ Stampolidis 2003, p. 238, nos. 56–57. Kourou 2008b, fig. 2:3–4.

⁹⁵ Bikai 1978, pl. V, pp. 16–17; 1981, pp. 33–34; 1987, pl. XII, nos. 210, 246, 265, 268, 272; Nuñez 2008, p. 25, fig. 4, type f; p. 28, fig. 6; pp. 58–59. For the typological assessment of the Phoenician flask from Ialysos see also Doumet-Serhal 1993–1994, p. 102, Catégorie (d), pl. III:5 (mid-eighth century BC onwards); Peserico 1996, p. 41, Tipo 1 (a fungo); Lehmann 1996, Form 239/1 (Tafel 40); Nuñez 2004b, type Ja 3; Whincop 2009, Class o85b.

⁹⁶ Nuñez 2004a, p. 175, fig. 90, no. 3; Bikai 1987, pl. XII, no. 264.

⁹⁷ Al Bass V and the Amathus Horizon of Cyprus cover the whole of the seventh and the early sixth century BC, yet the spherical mushroom-lipped jugs do not cover the whole of this period. On the chronology of Tyre al-Bass V see Nuñez 2004b, pp. 363–366; 2008, pp. 65–68.

⁹⁸ Jacopi 1929, p. 144, no. 2 (inv. 11851), fig. 139. The tomb also contained numerous bronze fibulae, some of which were fragmentary.

⁹⁹ Coldstream 1968, p. 270 and pl. 5e. See also Johansen 1957, pp. 120–122.

¹⁰⁰ Johansen 1957, p. 46, M3, fig. 106.

¹⁰¹ Coldstream 1968, p. 268.

¹⁰² Coldstream 1968, p. 270: "Exochi M2... foreshadows the later Rhodian variety and should be classed as transitional to LG."

¹⁰³ Johansen 1957, p. 46, M2, figs. 104–105.

¹⁰⁴ Coldstream 1968, pl. 61h.

¹⁰⁵ Coldstream 1968, pp. 280–281, pl. 61f–h.



Fig. 7.

should be ascribed a more advanced typological stage than the latter, falling entirely into the Late Geometric period. Shallow skyphoi with offset lips retained their presence in Rhodes during the second half of the eighth century¹⁰⁶ (as they also did in Late Geometric Ia Attica)¹⁰⁷ sometimes decorated in the local Black-on-Red manner.¹⁰⁸ Coldstream suggested a late eighth century BC chronology for the Phoenician flask of Ialysos.¹⁰⁹ A date in the last quarter of the eighth century BC seems possible for the Phoenician vessel of Tsambikos tomb 132 (442) on the basis of the flask's typological features, chiefly the shape of the rim and the neck.¹¹⁰

A second, partly preserved Phoenician import¹¹¹ excavated in Drakidis Tomb 9 (213) at Ialysos (Fig. 7),¹¹² belongs to the same sequential stage as the previously discussed vase from the Tsambikos tomb 132 (442).¹¹³ The fabric is porous and orange (7.5YR 8/6) in colour. The upper half of the neck is decorated with red bands with black stripes in between. Although the rim is missing, its morphological and decorative features suggest that the vase belongs to the mushroom-lipped

¹⁰⁶ Coldstream 1968, p. 283 n. 4.

¹⁰⁷ Coldstream 1968, pl. 9a–d.

¹⁰⁸ Bourogiannis 2009, fig. 6.

¹⁰⁹ Coldstream 1969, p. 2.

¹¹⁰ Nuñez, personal communication.

¹¹¹ Due to its state of preservation, this vase has not hitherto received as much attention as its complete counterpart from the Tsambikos tomb. Kourou (2008b, p. 319 n. 61) has rightly included it in the discussion of the Phoenician imports in Rhodes.

¹¹² Jacopi 1929, p. 39, no. 4, fig. 24 (inv. 10559).

¹¹³ See also Peserico 1996, p. 79 (Jalisos 4), which she includes in her 'Tipo 1'.

jugs with spherical body of Phoenician Bichrome ware. Unluckily, this second import was found in a disturbed single burial. The main chronological tools of the Drakidis tomb are two fragmentary oinochoai with cylindrical necks.¹¹⁴ The more complete between them closely imitates the shape of the spherical trefoil-lipped jugs of the Cypro-Archaic I period. Cypriot-type trefoil-lipped jugs with spherical body, often decorated in the local geometric style, are a common feature of the Late Geometric production of Rhodes. One of the richest assemblages was produced at Exochi, in tomb D and belongs to the second half of the eighth century BC.¹¹⁵

An additional tool for the dating of Drakidis tomb 9 (213) is provided by the tall neck of a second oinochoe,¹¹⁶ marked by a pronounced pinched rim and decorated with roughly drawn stripes vertically arranged along the neck. Although not particularly frequent, oinochoai with tall necks are characteristic of Rhodian late eighth century contexts¹¹⁷ and seem to stem from the free amalgamation of Phoenician and Cypriot elements. A wholly preserved Rhodian example that stands very close to the fragmentary oinochoe of Drakidis tomb 9 (213), both in terms of shape and decoration, is found in Antikenmuseum, Berlin.¹¹⁸ Although the exact provenance and context of the Berlin example are unknown, the vessel displays close stylistic similarities with an oinochoe from tomb D at Exochi dated around 700 BC.¹¹⁹ A dating towards the end of the eighth century BC looks, therefore, possible for the Phoenician flask of the Drakidis tomb and is in agreement with the contexts of similar Phoenician vessels from Cyprus and the Levant.

Our understanding of Phoenician pottery imports in Late Geometric Rhodes is hampered by incomplete information on important contexts, some of which are only known through brief reports. The unpublished tomb 188 at Agioi Asomatoi — Ialysos holds a prominent position in this respect. It produced two Phoenician mushroom-lipped jugs of Bichrome ware, decorated with red bands and black fillets on the upper part of the neck.¹²⁰ The shapes of their bodies are piriform and oval respectively, standing on narrow ring bases. Their necks are compact and rather short, flaring into a broad or mushroom-shaped rim. The same burial contained a neck-ridge juglet, most probably of local manufacture, decorated with alternating concentric circles and vertical sets of wavy lines on the shoulder and lower part of the body.¹²¹

Mushroom-lipped flasks with oval or narrow piriform bodies provide the intermediate link between the two main types of Phoenician jugs with mushroom-shaped rims: those with spherical bodies and those with pear-shaped bodies and carinated shoulders.¹²² The preservation of the curved outline indicates that the oval jugs were created as a variant of the globular mushroom-lip class, with which they coexisted during their initial stages.¹²³ Although the beginning of the oval

¹¹⁴ Jacopi 1929, fig. 24, third and fourth from left.

¹¹⁵ Johansen 1957, figs. 62–66, 68–69, 73–76.

¹¹⁶ Jacopi 1929, p. 38, no. 2, no. 24.

¹¹⁷ Bourogiannis 2009, pp. 119–120; Kourou 2003, fig. 2.

¹¹⁸ Furtwängler 1886, p. 137; Johansen 1957, p. 152, fig. 220.

¹¹⁹ Johansen 1957, fig. 62, pp. 152–154.

¹²⁰ Papapostolou 1968, pl. 42d (inv. 10465 and 10466).

¹²¹ Papapostolou 1968, p. 86, no. 4, pl. 42d middle (inv. 10467).

¹²² Nuñez 2004b, figs. 165–166, type Ja 3a and Ja 3b.

¹²³ Nuñez 2004b, p. 311; 2008, p. 59, fig. 26:8. The jugs with oval bodies seem to precede those with piriform bodies and curved outlines.

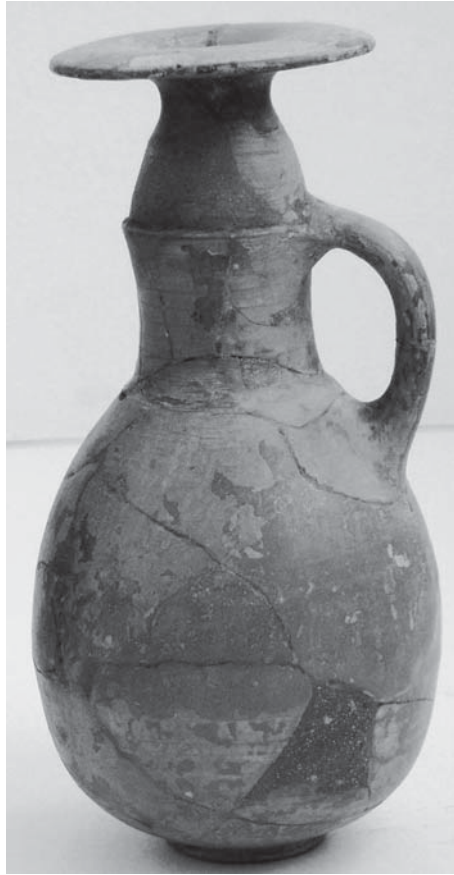


Fig. 10.

type occurs at Tyre stratum III¹²⁴ alongside the globular variety, this class gains popularity from the beginning of the seventh century BC onwards, which corresponds to Tyre stratum I, the Amathus Horizon of Cyprus and sub-Geometric or early archaic Greek contexts.¹²⁵

From a Rhodian perspective, Papapostolou¹²⁶ dated tomb 188 of Agioi Asomatoi around 700 BC, to an advanced stage of the local Late Geometric style, based on the presence of a morphologically similar yet technically not identical mushroom-lipped juglet in tomb A of the Exochi cemetery (Fig. 10).¹²⁷ The latter, which is made of pink (7.5YR 7/4) clay and is fully coated in red (2.5YR 5/6) slip, is securely dated to the beginning of the seventh century BC¹²⁸ on the basis

¹²⁴ Bikai 1978, pl. V, no. 14.

¹²⁵ Nuñez 2008, pp. 65–66.

¹²⁶ Papapostolou 1968, pp. 90–91. For the parallel from Exochi see Johansen 1957, fig. 21. Compare Nuñez 2004a, p. 143, fig. 58, no. 2.

¹²⁷ Johansen 1957, p. 18, A17, fig. 21 (National Museum, Copenhagen, inv. 12421).

¹²⁸ Johansen 1957, p. 162: “Grab A, das nach seinem übrigen Inhalt am Anfang des siebenten Jahrhunderts angesetzt werden muss.”

of two early Protocorinthian kotylai.¹²⁹ The early seventh-century chronology of Exochi — tomb A is further corroborated by the presence of a large neck-handled amphora decorated with a naked male figure, which is purely sub-Geometric in style.¹³⁰ A second identical juglet with pear-shaped body was found in tomb B of Exochi, also dating to the early seventh century BC.¹³¹ The local manufacture of the two vessels from Exochi is also implied by minor morphological details that deviate from the corresponding Phoenician norm: the bizarre conical rendering of the upper part of the neck, the excessively pronounced neck-ridge and the somewhat offset position of the handle, the bottom edge of which is attached at a rather low position of the shoulder.

The coexistence of the two imported Bichrome flasks from Ialysos tomb 188 at Agioi Asomatoi and their locally produced copies portrays the strong Phoenician elements and their immediate integration into the ceramic production of the late eighth and early seventh-century BC Rhodes. Although the ovoid and pear-shaped flasks from Exochi were found in contexts of the early seventh century, the question of a slightly raised chronology for the two imported vessels from tomb 188 at Ialysos remains open and is indicated by the small neck-ridge juglet decorated with concentric circles and wavy lines found in the same tomb. This vase marks the earliest stage of a development that by the end of the eighth century BC would lead to the so-called 'Kreis- und Wellenband' or 'Spaghetti-Ware' aryballoi, one of the most characteristic Late Geometric creations of Rhodes.¹³² Its shape and decoration stemmed directly from the Cypriot tradition but became fully integrated into the ceramic tradition of the island. The closest parallels to the juglet from tomb 188 are spotted in tombs 56 (414) and 58 (422) of the Tsambikos cemetery,¹³³ both of which date to *ca.* 730–710 BC.¹³⁴

Red Slip

Phoenician Red Slip ware had a considerable impact on the ceramic production of Rhodes from the beginning of the seventh century BC onwards. The first stages of this major evolution occur rather early in the local Late Geometric sequence.

Tomb 58 (422) of the Tsambikos plot at Ialysos contained a mushroom-lipped juglet with globular body and narrow ring foot (Fig. 8).¹³⁵ The vessel is characterised by a relatively tall neck with a pronounced ridge halfway up its height. The lower half of the neck is decorated with black vertical stripes. The fabric, which is fired grey, has fine inclusions and some silver mica, implying a local manufacture. The largest part of the surface is coated in a dark greyish slip, although small parts of the surface retain their original orange (7.5YR 8/6) colour.

¹²⁹ Johansen 1957, p. 15, A8–9, fig. 14.

¹³⁰ Johansen 1957, figs. 5–7. Coldstream (1968, p. 286) saw the amphora from Exochi as the link with the beginning of the Early Protoattic.

¹³¹ Johansen 1957, p. 28, fig. 43 (B8).

¹³² Johansen 1957, pp. 155–156; Boardman 2004, pp. 154–155; Grasso *et al.* 2004.

¹³³ Jacopi 1929, p. 94, nos. 3–4 (inv. 11742–11743), fig. 90; p. 100, no. 2 (inv. 1775–1776, 11786), fig. 93.

¹³⁴ Coldstream 2003, p. 250.

¹³⁵ Jacopi 1929, p. 100, no. 1 (inv. 11774), fig. 93, bottom row. Note that the vessel is mentioned as a 'spherical-body oinochoe' in the original publication.



Fig. 8.

Even though its technical features indicate local manufacture, the flask stands remarkably close to corresponding types of the Phoenician repertoire. The prototype followed is clearly that of the mushroom-lipped jugs with spherical body,¹³⁶ which is attested in Rhodes by actual imports. Yet when compared to the Phoenician Bichrome flask from Tsambikos tomb 132 (442) mentioned previously, the jug from tomb 58 (422) is not identical in shape but belongs to a later step in the typological sequence. Its globular body, well-articulated neck with convex outline and the sharp ridge halfway up the neck's height all delineate a preceding point in the evolution of the mushroom-lipped jugs, as opposed to the slightly baggy body, conical upper neck and the reduced neck-groove (instead of an actual ridge) in the vessel from Tsambikos tomb 132 (442).¹³⁷

¹³⁶ There are of course numerous parallels in metropolitan Phoenicia as well as Cyprus. See for example: Nuñez 2004a, p. 90, U.27-3, fig. 78 (earliest stages of al Bass IV, which roughly coincides with the beginning of Tyre Stratum III, suggesting a date around 740 BC). Bikai 1987, no. 272 (Kition Horizon).

¹³⁷ Compare Nuñez 2004b, p. 310, fig. 165 and Nuñez 2008, p. 59, fig. 26, no. 8.

Although the chronological and typological associations of this specific type in Levantine and Cypriot contexts have already been discussed¹³⁸ it is useful to mention two additional cases with significant chronological implications, where globular mushroom-lipped jugs coexist with Aegean imports. One of them was found in a burial at Khaldé cemetery, close to Beirut, and was accompanied by an imported shallow skyphos with disc base and vertical offset lip,¹³⁹ a shape that is strongly reminiscent of Cycladic Late Geometric types.¹⁴⁰ The second example was found in tomb 46 of the Ayia Irini cemetery in Cyprus, where the Phoenician mushroom-lipped jug occurred alongside an imported skyphos of Euboean-Cycladic origin¹⁴¹ but its shape and decoration correspond to the normal Middle Geometric II type of Attica,¹⁴² hence suggesting a date close to the middle of the eighth century BC.

In the Aegean itself, it is, again, Crete which provides us with the closest imported parallel for the vase from Tsambikos tomb 58 (422). Tomb ΑΙΚΙ at the prolific site of Eleutherna produced a Phoenician Bichrome jug with globular body and mushroom-shaped lip.¹⁴³ The jug was found in a Late Geometric horizon, suggesting a date in the second half of the eighth century BC, although an Early Orientalising association has also been argued for on the basis of a few sherds and an undecorated lekanis.¹⁴⁴ Leaving aside the chronological problems occasioned by multiple burials in Crete, there is little doubt that tomb 58 (422) at Rhodes belongs to a purely Late Geometric horizon. Even though the stylistic differentiation among some of the vases has been viewed as an indication of more than one burial, this repeated usage of the tomb has not yet been proved archaeologically, unless it has been totally disregarded in the publication. Coldstream initially dated tomb 58 (422) soon after 750 BC, at an initial stage of the local Late Geometric style.¹⁴⁵ That chronology was later revised to around 730 to 710 BC.¹⁴⁶ If the suggestion of a repeated use of tomb 58 is valid,¹⁴⁷ then the Phoenician-type jug should be associated with the earliest one of the two suspected burials and be dated around 730 BC.¹⁴⁸

Transition to the seventh century: the Phoenician apogee of Rhodes

Previous discussion has shown that the last quarter of the eighth century BC produced the first indisputable evidence for Phoenician imports in Rhodes: two imported flasks of Phoenician Bichrome ware. If these first imports are considered alongside the flask from Tsambikos tomb 58 (422), an

¹³⁸ Nuñez 2008, pp. 58–65.

¹³⁹ Saidah 1971, p. 197, c, e.

¹⁴⁰ Coldstream 1968, pl. 38a, c. See also Coldstream 1968, pl. 9a–d, Attic Late Geometric Ia (760–750 BC) with ring instead of disc foot.

¹⁴¹ Rocchetti 1978, p. 77, 46:2 and 46:4.

¹⁴² Coldstream 1979, pp. 257 and 258, fig. 1b.

¹⁴³ Stampolidis 2004, p. 255, no. 289; Kotsonas 2008, p. 285, fig. 70, Α118a, pp. 287–288.

¹⁴⁴ Kourou 2008b, p. 319, note. 64, fig. 2:8.

¹⁴⁵ Coldstream 1968, p. 274; 1969, p. 3.

¹⁴⁶ Coldstream 2003, p. 250.

¹⁴⁷ Papapostolou 1968, p. 84.

¹⁴⁸ Nuñez (personal communication) also suggested a date around 740–730 BC on stylistic grounds. The suspected ‘earlier’ phase of the burial also included a shoulder fragment of a Cypriot White Painted IV oinochoe, a belly-handled amphora (11795), a fragmentary stamnos (11796) and a krater (11788); see Jacopi 1929, p. 101, no. 10 (inv. 11788), p. 102, nos. 17–18 and p. 20 (inv. 11795, 11796, 11798); see also Papapostolou 1968, pl. 38a–γ.

exact copy of a Phoenician mushroom-lipped jug with globular body, then we may not be wrong to suggest that the Phoenician presence in Rhodes starts displaying a clearer ceramic signature from around 740/730 BC onwards.

Pottery of purely Phoenician origin or inspiration was accompanied by other evidence of Levantine, albeit not necessarily Phoenician, origin. The plastically modelled human face, decorating the neck of small juglets is a north Syrian rather than a Phoenician notion, the most famous exported example of which was found at Pithekoussai and dates to the last quarter of the eighth century BC.¹⁴⁹ Rhodes has not yet yielded imports of this type but the motif is visible on the small juglet from Tsambikos tomb 56 (414), dating to *ca.* 730 BC.¹⁵⁰ The same decorative element is present on some unpublished vessels from the Athena sanctuary at Ialysos. In two of these cases the plastic face decorates the neck of a short body of rather ungainly shape with excessively broad disc base.¹⁵¹ The undecorated version of the north-Syrian neck-ridge juglets with squat globular body, narrow base-ring and horizontal rim is also attested in Rhodes, particularly at the area of Lindos. The most securely dated examples come from Exochi and belong to *ca.* 700 BC.¹⁵² The type is also known from the sanctuaries of Rhodes, particularly that of Lindos.¹⁵³ Further west, the best-known parallels are again produced at Late Geometric I and II burial contexts of Pithekoussai.¹⁵⁴

The beginning of the seventh century BC marks a new era in the contacts of Rhodes with the east. Pottery evidence of Phoenician character increased considerably during this period and, up to a certain degree, the local ceramic taste was revolutionised. The transformation that occurred in Rhodian pottery during the first decades of the seventh century is unparalleled in the Aegean world and strongly suggests the existence of uniquely strong links between Rhodes and the Levant. The ceramic symbol of this 'Phoenicianising apogee' of the seventh century BC is the mushroom-lipped jug with pear-shaped body and carinated shoulder, which marks the last stage in the evolution of the Phoenician mushroom-lipped jug. The new shape, which was copied on a large scale using local clay and featured the red-slipped technique or was simply burnished, rapidly developed into one of the most popular closed shapes of the local repertoire, succeeding the Cypriot neck-ridge juglets of the eighth century BC. Remarkably, the potters that produced these flasks showed no attempt at active interaction with the local tradition, but their products constitute a distinct facies within the ceramic milieu of Rhodes.

Pear-shaped mushroom-lipped jugs with carinated shoulder appear in al Bass Period IV, Tyre stratum III and the Kition Horizon of Cyprus, dating to the second half of the eighth century, and display a concrete presence in Phoenician contexts from that time onwards.¹⁵⁵ The popularity

¹⁴⁹ Buchner and Ridgway 1993, p. 276, T215.4, pl. 93, CXXXVIII; Buchner 1982, p. 280, IIb, fig. 2c–d.

¹⁵⁰ Jacopi 1929, p. 94, no. 2 (inv. 11741), fig. 90; Coldstream 1969, pl. II d–e.

¹⁵¹ Papapostolou 1968, pl. 40γ–δ.

¹⁵² Johansen 1957, figs. 18, 44–45 (A22, A23, A24, B9, B10, D19, D20). Tomb D is not as useful as a dating tool. Its content indicates more than one burial (Johansen 1957, pp. 143–144, 153; Coldstream 1968, p. 274).

¹⁵³ Blinkenberg 1931, nos. *1043–1045, pl. 48 (1043).

¹⁵⁴ Buchner and Ridgway 1993, pp. 209–210, T166, nos. 5–8, pls. 66, CXXII (Late Geometric I); pp. 607–608, T623*, no. 1, pl. CLXXX (Late Geometric II). Buchner 1982, p. 280, IIa, fig. 2a–b.

¹⁵⁵ Bikai 1978, pl. VI, nos. 4–5 (Tyre II–III); pl. V, nos. 19–23 (Tyre III). Nuñez 2008, p. 58: "At this point a second variation of the mushroom-lipped jug just appears, which is characterised by a piriform body with a more or less carinated shoulder. And surfaces that are covered by a burnished red slip." For some of the Cypriot examples: Bikai 1987, pl. XIII, nos. 274, 298, 312 (Kition Horizon).

of this class increased further during the subsequent periods of al Bass V, Tyre Stratum I and the Amathus Horizon of Cyprus that cover the whole of the seventh century BC.¹⁵⁶ In respect to the Greek sequence, “the greater part of this stage corresponds to the Sub-Geometric and especially to the archaic period.”¹⁵⁷ The first Rhodian examples come from contexts of a very advanced Late Geometric style and continue uninterrupted into the Sub-Geometric and Archaic periods.

Although the small juglets are regularly found in votive contexts,¹⁵⁸ it is their presence in burials that contributes most to the discussion of their chronology. Evidence suggests that Ialysos retained its eminent position as the principal entry point of the Phoenician influence in Rhodes during the seventh century, producing one of the earliest examples of this type. Tomb 17 (251) of the Drakidis cemetery yielded a flask that, in spite of the clearly marked carination of the shoulder, preserves the rounded outline of its predecessors and can thus be ascribed an early place in the series of carinated mushroom-topped flasks (Fig. 9).¹⁵⁹ The vessel, fully coated in red (2.5YR 4/6) slip, is made of fine pink (7.5YR 7/4) clay with silver mica, suggesting a local manufacture. Coldstream¹⁶⁰ dated the flask to the beginning of the seventh century BC on stylistic criteria. The tomb also contained an odd globular aryballos with incised linear decoration¹⁶¹ on the shoulder, and a bronze fibula.

The class is also attested at the cemetery of Exochi, one of the most important sources of information for Late Geometric Rhodes. The two examples are almost identical in shape, particularly in terms of the narrow ring base, carinated shoulder, the reduced ‘step’ at the middle of the neck and the mushroom-shaped rim. One of them,¹⁶² found in tomb B, bears no slip and coexisted with the pear-shaped version of the mushroom-topped flask and the squat North-Syrian aryballoi.¹⁶³ Tomb B displays some firm chronological indicators that anchor the burial to the first decades of the seventh century BC: the large, pedestalled krater decorated with spirals and cross-hatched meander in a tri-metopal arrangement — a feature that occurs late in the local Late Geometric style — the deep-pedestalled kantharos with tall vertical rim, and the kotyle with straight rim decorated with vertical wavy lines bordered by two sets of vertical strokes on either side, made after imported Early Protocorinthian prototypes.¹⁶⁴ Since the actual Protocorinthian

¹⁵⁶ Nuñez 2004b, p. 365, fig. 250; Bikai 1987, pl. XIII, nos. 278, 285–286, 289 296, 309, 313–314, 316 (Amathus Horizon).

¹⁵⁷ Nuñez 2008, p. 66.

¹⁵⁸ Blinkenberg 1931, p. 300, nos. *1035–1038, * 1040, pl. 48 (1035, 1040).

¹⁵⁹ Jacopi 1929, p. 45, no. 1 (inv. 10649), pl. II.

¹⁶⁰ Coldstream 1969, p. 2.

¹⁶¹ Jacopi 1929, p. 45, no. 2 (inv. 10650), fig. 32.

¹⁶² Johansen 1957, p. 25, B7, fig. 42.

¹⁶³ Johansen 1957, p. 28, figs. 43–45.

¹⁶⁴ Johansen 1957, figs. 34–41. The pedestalled krater from tomb B at Exochi marks the final stage in the sequence of the Late Geometric Rhodian kraters. Its attribution is mainly based on stylistic criteria: the three-metope scheme, where the central panel is horizontally divided into several strips (Johansen 1957, fig. 36a) is an arrangement that occurs late in the Late Geometric style of Rhodes (Coldstream 1968, pp. 282, 284). Furthermore, the extensive use of spirals is an additional element that points towards the end of the Late Geometric period. (On the chronological attribution of the pedestalled krater from Exochi tomb B, see also Johansen 1957, pp. 110–111.) The pedestalled kantharos from the same burial leads to similar conclusions. Stylistic details such as the rounded hooks of the so-called tree motif (Johansen 1957, fig. 39) only occur at a late stage of the Rhodian Late Geometric (Coldstream 1968, pp. 284–285). The second kantharos from tomb B (Johansen 1957, fig. 40) also points to an early seventh century dating of the ceramic complex. Its rather dull and repetitive decoration of hatched zigzags is paralleled by a kantharos from tomb 7 (9) of the Papa tis Lures cemetery at Kamiros, found together with an imported Early Protocorinthian pyxis (Jacopi 1933, p. 43, figs. 35–36).



Fig. 9.

kotylai first occur at Exochi and Kamiros in Rhodes around 700 BC,¹⁶⁵ their locally produced Rhodian imitations are thought to have followed soon after the originals and only shortly before the end of the Rhodian Late Geometric at 690/680 BC.¹⁶⁶

The second mushroom-topped flask with carinated shoulder was found in tomb C and is coated in a red slip.¹⁶⁷ The burial also provides a firm ceramic context that indicates a date in the first decades of the seventh century: a large, pedestalled krater decorated with a stylised palm tree almost sub-geometric in style, two kotylai imitating the correspondent early Protocorinthian type and a skyphos decorated with an indeterminate quadruped listening to a lyre.¹⁶⁸

¹⁶⁵ Jacopi 1933, p. 74, T 22 (28), no. 1 (from Kamiros); Johansen 1957, p. 15, A8–9, fig. 14 (from Exochi).

¹⁶⁶ Johansen 1957, p. 121; Coldstream 1968, p. 283.

¹⁶⁷ Johansen 1957, p. 27, C6, fig. 52.

¹⁶⁸ Johansen 1957, figs. 46–51, 57. The stylised palm-tree decorating the lateral metopes on both sides of the pedestalled krater is possibly a loan from Levantine ivory work (Johansen 1957, pp. 111–112 n. 111; Coldstream 1968, p. 285) and adds to the heavy oriental influence on the pottery of Rhodes in the early seventh century BC.

It appears therefore that the mushroom-lipped juglet with carinated shoulder represents a significant turning point in the course of Rhodian pottery: the intensification of the Phoenician presence in Rhodes, and the final conclusion of the Geometric style on the island, both of which occurred in the period around 700 to 680 BC. Noticeably, the class displays an uninterrupted presence in Rhodes, persisting well into the seventh century BC. Some of the best contextualised examples come from tomb 37 (344) of the Koukkia cemetery at Ialysos. In this rich cremation, three small neck-ridge juglets with angular outline and stilted or mushroom-shaped rim¹⁶⁹ were found alongside two bird bowls, one Ionian cup and seven Protocorinthian aryballoi with ovoid body, dating to the third quarter of the seventh century BC.¹⁷⁰ The tomb also contained a Phoenician graffito incised on a small sherd,¹⁷¹ representing one of the most eloquent pieces of evidence of the Phoenician presence on the island.

A red-slipped example with an unusually baggy body was found in tomb 205 (8) of the Kechraki cemetery in Kamiros.¹⁷² The tomb, an infant enchytrismos, is securely dated to *ca.* 650–640 BC on the basis of an Early Wild Goat fragmentary oinochoe and a Late Protocorinthian alabastron contained in the same burial.¹⁷³ Kamiros and the cemetery of Makri Langoni in particular produced one of the latest attestations of the class with carinated shoulder. Tomb 4 (4) yielded a small neck-ridge juglet with a shorter rim and a pear-shaped body.¹⁷⁴ The vase is securely dated to the last quarter of the seventh century BC, on the basis of two Early Corinthian aryballoi with globular and pear-shaped body, and two vessels of Middle Wild Goat II style.¹⁷⁵ The ‘orthodox’ type of mushroom-lipped flask with angular outline survives in tomb G at Exochi,¹⁷⁶ (Fig. 11) the latest amongst the burials excavated there. The small vase, only 7.7 cm high and coated in a misfired dark brownish slip, was found alongside a local skyphos that copies the shape of the Late Protocorinthian kotylai and an Ionian cup with short offset rim,¹⁷⁷ indicating a date in the late seventh century BC.

¹⁶⁹ Jacopi 1929, p. 65, no. 11 (inv. 11444, 11457–11458), fig. 54.

¹⁷⁰ Jacopi 1929, p. 64, nos. 1–2 (bird bowls); p. 65, no. 7 (Ionian cup); p. 67, no. 19 (Protocorinthian aryballoi). For the dating of the burial, see Coldstream 1969, p. 5; Kourou 2003, p. 256. On the Protocorinthian aryballoi see Neef 1987, pp. 425, 2111–2117. On the bird bowls: Coldstream 1968, pp. 298–301. Cook and Dupont 1998.

¹⁷¹ Amadasi Guzzo 1987, pp. 16–17, fig. 2.

¹⁷² Jacopi 1931, p. 359, no. 4 (inv. 12535), fig. 399.

¹⁷³ Jacopi 1931, fig. pp. 399–401. The jug from tomb 205 was produced in the same workshop as a better preserved trefoil-lipped example from tomb 10 (12) of the Papa tis Loures cemetery, also at Kamiros (Jacopi 1933, figs. 43–44). On the Early Wild Goat jug see Kardara 1963, p. 32, no. 6; Schiering 1957, pp. 8–9; Walter 1968, p. 60; Iren 2003, pp. 30–31 n. 193. See also Cook and Dupont 1998, pp. 33–36. On a recent reconsideration of the style: Kerschner and Schlotzhauer 2005.

¹⁷⁴ Jacopi 1931, p. 51, no. 5 (inv. 12091), fig. 22. For a similar Phoenician juglet from Cyprus, Bikai 1987, pl. XXVIII, no. 319 (Amathus Horizon, after 700 to after 600 BC).

¹⁷⁵ Schiering 1957, p. 11; Kardara 1963, p. 20; Gates 1979, pp. 16 and 52–54.

¹⁷⁶ Johansen 1957, p. 43, G1, fig. 90.

¹⁷⁷ Johansen 1957, p. 45, figs. 91–92. For the Late Protocorinthian kotylai compare Pemberton 1989, p. 80, no. 7, pl. 4. Ionian cups similar to the example from Exochi are common at the site of Vroulia, where they occur alongside Late Protocorinthian and Early Corinthian imports (Johansen 1957, p. 166 n. 350). The shape of the Ionian cup, with the shallow body, low tapering foot and everted rim, stands close to the class B1 (Villard and Vallet 1955, fig. 4) or V (Boardman and Hayes 1966, p. 112), which date to *ca.* 620–580 BC. Johansen (1957, p. 8) had placed the lower chronological edge of Exochi to the second quarter of the seventh century, but the presence of an Ionian Cup in tomb G implies a post-mid-seventh-century terminus for the use of the cemetery.



Fig. 11.

From ivory into clay: a new incident of Phoenician experimentation?

Discussion of Phoenician elements in the pottery of Cos and Rhodes and, consequently, the ceramic implications of the Phoenician presence in this part of the Aegean may also light on a small group of vases from advanced Late Geometric contexts that have been associated with oriental ivory prototypes. The idea was first proposed by Friis Johansen in his monumental publication of the Exochi cemetery in Rhodes and was further supported by Nicolas Coldstream in his discussion of the Rhodian Late Geometric style.¹⁷⁸ By using specific morphological and decorative criteria, Johansen isolated a small number of locally produced vases that he interpreted as imitations of oriental ivory vessels.¹⁷⁹ The group comprises two distinct shapes with elaborate decoration: the trefoil-lipped jug with ovoid body and tall neck,¹⁸⁰ and the large cylindrical pyxis with conical lid. Both are characterised by the application of red slip, a technical oddity that resembles the 'Dodecanesian' imitations of Black-on-Red¹⁸¹ or may simply have aimed at a visual reproduction of the dyeing of ivory.¹⁸²

¹⁷⁸ Coldstream 1968, p. 275.

¹⁷⁹ Johansen 1957, pp. 148–154.

¹⁸⁰ The shape may rest on the free combination of Cypriot and Phoenician elements and is characteristic of the advanced Late Geometric style of Rhodes and, to a lesser degree, Cos (Bourogiannis 2009, pp. 119–120; forthcoming).

¹⁸¹ Bourogiannis 2009, p. 119.

¹⁸² Johansen 1957, pp. 149ff.

Johansen included four vessels in his 'ivory-imitation' category: two pyxides from Exochi tomb X and Kamiros tomb 85,¹⁸³ (Fig. 12, from Kamiros) and two oinochoai, one of which was found at Exochi tomb D (Fig. 13).¹⁸⁴ To his initial cluster of material can be added an interesting oinochoe from Ialysos tomb 51/393 (Fig. 14),¹⁸⁵ as well as a cylindrical pyxis from cremation D, brought to light a few years ago at Kardamaina in Cos.¹⁸⁶ All these vases, very similar in style and fabrication,¹⁸⁷ belong to an advanced stage of the Late Geometric sequence and date towards the end of the eighth century BC.¹⁸⁸ Even though their distribution suggests a localised trend, on present evidence it is difficult to locate their exact place of manufacture. What becomes clear, however, is that they define a distinctive and short-lived ceramic phenomenon of the south-east Aegean, indicating special links with Levantine ivory artefacts. This relationship existed during a period when the local pottery displayed firm signs of a considerable Phoenician influence; hence it seems to have been initiated or to have developed as a result of the enhanced Phoenician activity in the area.

The suspected interaction between technologically different groups of material is easier to detect in the case of the pyxides from Exochi, Kamiros and Kardamaina. The rich assemblages of Nimrud, where ivory pyxides with cylindrical bodies were common during the ninth and eighth centuries, indicate a potential origin for the types on which the Dodecanesian pots were modelled.¹⁸⁹ In addition to the shape of the pyxides from Cos and Rhodes, which deviates from the Aegean tradition, it is also the decoration that is reminiscent of the Levantine ivory work: the extensive use of the cable pattern, the small concentric circles that correspond to the 'dice-eyes' motif of ivory artefacts and the rows of impressed small triangles that reproduce the *dogtooth* pattern of ivory objects all seem to advocate a special connection with the Levantine ivory workshops.¹⁹⁰ The small circles in particular are used as the principal ornament on the previously mentioned ovoid jugs with elegant body and narrow base-rings. Their shape may be associated with Levantine ivory jugs,¹⁹¹ although the morphological similarity does not appear as straightforward as in the case of the pyxides.

¹⁸³ Exochi: Johansen 1957, p. 62, fig. 128 (X3); Kamiros: Jacopi 1932–1933, p. 203, no. 1 (inv. 14749), fig. 243.

¹⁸⁴ Johansen 1957, p. 35, fig. 62 (D2), from Exochi; p. 153, fig. 220 (Berlin; from Rhodes, exact provenance unknown). Coldstream (1968, p. 275 n. 3) added a third vase to Johansen's group.

¹⁸⁵ Jacopi 1929, p. 87, no. 5 (inv. 11651), fig. 75 (bottom row, first from the left).

¹⁸⁶ Skerlou 2001, p. 272, fig. 28.

¹⁸⁷ They are made of orange clay with silver mica.

¹⁸⁸ Johansen (1957, pp. 153–154) dates the examples from Exochi around 700 BC. A similar date has been suggested for the pyxis from tomb 85 at Kamiros (d'Agostino 2006, p. 65). There is no consensus regarding the chronological attribution of Ialysos tomb 51 (393), which may be slightly earlier than the rest of the group. It also contained two Cypriot jugs of Black-on-Red II (IV) ware (Jacopi 1929, p. 87, nos. 3–4 (inv. 11649–11650), figs. 75 and 78). Johansen (1957, p. 138 n. 237) and Papapostolou (1968, p. 93 n. 77) suggested a date close to the late eighth century BC. For an earlier chronology, possibly around 730/720 BC, see Coldstream 1968, p. 282; Demetriou 1978, pp. 20–22.

¹⁸⁹ Barnett 1957, pls. XVII–XVIII, XX–XXIII. Barnett 1982, pl. 45a–d. Herrmann 1989, pls. Xb, XI, XII. Less frequent were the pyxides with a tall cylindrical body (Barnett 1957, pl. XXXIII).

¹⁹⁰ For the cable pattern, Barnett 1957, pl. XXIX, S35, S36e, S36n, S39; for the 'dice-eyes', Barnett 1957 pl. XXX, S44a–b, S36k; for the 'dog-tooth' pattern, Barnett 1957, pl. XXX, S36g–i. See also Herrmann 1986, pls. 320.1234, 322.1237–1241, 389.1457; 1992, pls. 1.9, 8.58, 10.61–62, 14–15, 22.19, 25.120, 40.192, 52.276–278, 91.475–476.

¹⁹¹ Barnett 1935, pl. XXIV.1.



Fig. 12.



Fig. 13.



Fig. 14.

What this group of material seems to reflect, therefore, is an additional, albeit indirect, ceramic manifestation of the Phoenician presence in Cos and Rhodes in the late eighth-early seventh century BC. One may need to go no further than the Idaean Cave in Crete to locate the possible prototypes on which the Dodecanesian vases were modelled: 19 fragments of cylindrical ivory pyxides, to which Sakellarakis ascribed a North Syrian provenance.¹⁹² Of special interest amongst the Idaean Cave ivories is the lid fragment of a late eighth-century cylindrical pyxis decorated, similarly to the vessels from Cos and Rhodes, with a cable pattern.¹⁹³ Even though it is difficult to suggest a convincing link between these ceramic imitations and a specific Levantine style of ivory carving,¹⁹⁴ the Syrian and Phoenician ivory workshops are amongst the most likely candidates, since their products have been identified at all three major sanctuaries of Rhodes.¹⁹⁵ Comparison between Syrian and Phoenician ivory artefacts reveals a much wider Mediterranean distribution for the Phoenician products, even though their circulation seems to begin somewhat later than the Syrian ones, from the middle of the eighth century.¹⁹⁶

What can be speculated with a greater degree of certainty is that responsibility for Aegean acquaintance with the Levantine ivory artefacts must have laid in the hands of Phoenicians, often credited with the trade and circulation of ivory artefacts in the Mediterranean.¹⁹⁷ Phoenician mobility between different geographic and cultural spheres of the Mediterranean interlinked different domains of craft specialisation and therefore facilitated the relationship of pottery producers with other technological groups.¹⁹⁸

The use of ornaments borrowed from Levantine ivory carving also encompassed other, more common shapes of the local repertoire. The cable pattern on a small neck-ridge juglet from Cos¹⁹⁹ and the stylised palm tree ornament on the krater from Exochi (tomb C)²⁰⁰ are both indicative of this tendency. Since all these vessels belong to the same late eighth to early seventh-century horizon, this 'ivory impact' on the pottery of Cos and Rhodes may be viewed as one of the first 'orientalising'²⁰¹ movements in the material culture of the area, a reflection of the enhanced interaction between the Dodecanese and the Levant.

¹⁹² Sakellarakis 1992, p. 114; 1993, p. 353.

¹⁹³ Sakellarakis 1984, p. 548, fig. 3.

¹⁹⁴ Distinguishing between different styles of ivory carving is an intricate task even when approached from an exclusively Levantine perspective: Ben-Shomlo and Dothan 2006, p. 28: "Several ivory-carving styles have been identified in the Iron Age II: the Assyrian, Phoenician, north Syrian and south Syrian styles in particular; note however that these styles are not always fully distinctive, and evidence seems to suggest local production."

¹⁹⁵ The anticipated full publication of the Ialysos votive deposit will enhance our knowledge of Levantine ivories in Rhodes and might provide us with the prototypes of the previously discussed vessels. For Phoenician ivories at the sanctuaries of Ialysos and Lindos, see Barnett 1982, p. 47; Blinkenberg 1931, pl. 5, no. 420. For products of the Syrian ivory carving: Barnett 1982, p. 45 n. 13, 15–16. For Kamiros, see Schofield 1992.

¹⁹⁶ Pisano 1999. The Phoenician connection in the importation and circulation of ivory artefacts in Rhodes is also suggested by the close stylistic similarities between Phoenician ivories and the lyre-player seals, for which Rhodes in one of the major distribution centres (Boardman 1990; Hodos 2006, p. 67).

¹⁹⁷ Barnett 1956; Gill 1992.

¹⁹⁸ See also Day *et al.*, 2010.

¹⁹⁹ Skerlou 2001, p. 261 fig. 7 (from Kardamaina, cremation ST).

²⁰⁰ Johansen 1957, figs. 46–48; pp. 111–112 n. 111; Coldstream 1968, p. 285.

²⁰¹ Burkert 1992. See also Antonaccio 2003, pp. 61–62.

The Phoenicians in the Dodecanese: where, when and why?

The preceding analysis aimed to identify Phoenician traits in the Geometric pottery of Cos and Rhodes and, subsequently, to outline possible transformations in the way this suspected oriental presence is manifested in the ceramic record of the area. Discussion has been based on a dual examination of the available evidence: imports and their locally produced copies were considered in relation to one another, as they form an individual group and are easily distinguished from the rest of the indigenous ceramic corpus. This first assemblage, which is primarily Phoenician in character, also includes some Syrian ideas: the small neck-ridge juglets with squat-globular bodies and the aryballoi with a plastically modelled face on the neck. Emphasis has also been placed on the identification of possible indirect signs of a Phoenician influence in local production, especially for periods preceding the beginning of actual imports. Evidence of interaction and, subsequently, the attestation of contacts on the ceramic record of the Dodecanese have been particularly illuminating in the case of Cos, where no Phoenician pottery imports have been identified so far.

The geographic and contextual designation of these Phoenician(-ising) elements in the Dodecanese seems to support a considerable Phoenician mercantile activity in the area, which contributed to the formation of a distinctive ceramic identity.²⁰² Clearly, the Phoenician impact on local pottery displays significant geographical as well as chronological variations. It appears considerably stronger in Rhodes, where it gradually increases in the late eighth and early seventh centuries BC. In comparison, Cos displays a rather fragmentary archaeological manifestation of such contacts, produced exclusively from the island's burials. Yet it was primarily the sanctuaries where commercial interaction is materially visualised in all its complexity and splendour. The extensive variety of imports²⁰³ from the votive deposits of Ialysos, Lindos and Kamiros, as well as the early archaic settlement of Vroulia in Rhodes, portrays a sound system of exchange mechanisms with the Levant, which had already reached its first climax by the late eighth century BC. In spite of this regional heterogeneity, however, all major Coan and Rhodian Middle and Late Geometric sites have produced at least some relevant evidence, outlining a rather regular pattern of contacts between the two areas.

Let me now tackle a more controversial aspect of the Phoenician presence in the southeast tip of the Aegean: its chronological setting. The question of the Phoenician presence overseas, its nature and chronological framework has been the focus of numerous studies that have attempted a historical as well as archaeological definition of this complex phenomenon.²⁰⁴ Despite being fundamental to the understanding of a nation whose name is synonymous with mercantile expansion, no consensus has been reached so far with regard to the exact historical background of the Phoenician presence overseas. Part of the problem is the difficulty of reconciling the dates implied

²⁰² The exceptional infant cemetery at Astypalaia is not included in the discussion due to the absence of a comprehensive publication (Hillson 2009; Michalaki-Kollia 2009; Smith *et al.* 2011, pp. 869–871).

²⁰³ Syrian and Phoenician ivories, incised tridacna shells, ostrich eggs, glass and faience objects, figurines and amulets, artefacts in precious metals, bronze mace-heads and bowls, are some of the categories of objects found in the Rhodian sanctuaries that attest to the intense contacts of Rhodes with the Near East from the eighth century BC onwards; see Kourou 2003, pp. 251–252.

²⁰⁴ To name only a few: Bunnens 1979; Baurain and Bonnet 1992, pp. 179–190; Gras *et al.* 1989, pp. 53–78; Markoe 2000, pp. 29ff.; Aubet 2001, pp. 159–211; 2008; Niemeyer 1995; Lipiński 2004; Sagona 2008.

by classical and biblical literary sources on one hand, and the archaeological record on the other. Further methodological obstacles relate to the particular features and aims of the Phoenician overseas expansion and colonisation in comparison to the equivalent Greek phenomenon, which has a more complete archaeological attestation.²⁰⁵ The unsatisfactory, rather inconsistent material visualisation of the Phoenicians beyond their homeland prior to the ninth century BC has led to the creation of alternative interpretative schemes such as the *pre-colonial expansion*: the first preliminary movements towards what would develop into a trans-Mediterranean enterprise.²⁰⁶

So what can be said from a 'Dodecanesian' perspective? I will endeavour to distinguish between the different stages of exchanges between the two areas and to delineate, if possible, a chronological framework for their gradual growth and intensification. The disparate archaeological manifestation of the Phoenician presence in the Aegean is a weakness that has been repeatedly acknowledged, posing additional difficulties to the discussion of the Phoenician issue in this area. Being conscious of the shortcomings in the material record of the Dodecanese, my purpose here is to present a regional chronological overview, applicable to both Cos and Rhodes. These two middle-sized Aegean islands may not provide us with definite answers but they can certainly contribute to the broader discussion of the Phoenician presence overseas.

Archaeological evidence, and pottery in particular, suggests three major chronological stages in the expansion of Phoenician presence in the area. The first, longest stage covers the whole of the ninth century BC, which corresponds to the Early and Middle Geometric I periods in Aegean stylistic terms. Although their material culture forms two distinct entities, both periods are characterised by the scarcity of ceramic indications of Phoenician (or Phoenicianising) nature.²⁰⁷ This striking dearth is partly mitigated by a small number of faience objects, mainly amulets, from burials at Cos and Ialysos that may have reached the Dodecanese through the Phoenician trading activity, although their exact provenance is by no means straightforward.²⁰⁸

The next phase covers the first half of the eighth century BC and is marked by the gradual transformation of the previous situation, indicating the enhancement of contacts with the east. Noticeably, this new development displays a Cypriot rather than Phoenician ceramic signature: the BoR imports and their locally produced imitations. The older tendency to view the presence of Cypriot BoR in the Aegean through 'Phoenician eyes' has been seriously questioned in recent years, so that argument does not need to be repeated here. Interestingly though, this is also the period when the first indirect ceramic evidence of Phoenician nature is produced in some of the later Middle Geometric burials of Cos, as a small group of bizarre red-slipped jugs with pinched rim indicate.

The third phase, which extends throughout the Late Geometric period, displays the greatest dynamism and produces the first indisputably Phoenician pottery evidence in the area. It can be further subdivided in two stages. The first, dated to the last quarter of the eighth century, marks the beginning of the Phoenician imports in Rhodes, visualised through the two mushroom-topped flasks of Bichrome ware. The second stage, started around 700 BC and continues after

²⁰⁵ Niemeyer 1990; 2006.

²⁰⁶ Niemeyer 2005, pp. 15–16; Aubet 2001, pp. 194ff.

²⁰⁷ When dealing with the Middle Geometric period in the Dodecanese, however, one should always keep in mind the complete absence of Rhodian evidence for the second half of the ninth century BC.

²⁰⁸ The same can be said for the faience disc-shaped beads from Protogeometric and Early Geometric burials of Cos.

the end of the Late Geometric. Phoenician presence on the island consolidates during this period, marked by a magnificent ceramic manifestation: the influx and production of small Phoenician flasks with mushroom-shaped rim and carinated shoulder, either in the red-slipped technique or simply burnished. The popularity of this rather unattractive vessel and its concrete presence in the burials and sanctuaries of the island is unparalleled in the Aegean and suggests a special pattern of trade and interaction between the Phoenicians and Rhodes. Part of this strong *Levantine* impact is also the presence of small juglets of north Syrian typology, and the influence of ivory-carving, the latter being more recently confirmed in Cos as well. Both phenomena most possibly occurred through Phoenician enterprise²⁰⁹ and offer a first glance of an almost orientalising process in Rhodes.

It seems therefore that the actual transitional stage for the Phoenician presence in the area should be placed around the beginning of the seventh century BC, when Phoenician pottery types appear in Rhodes in substantial quantities. The enhanced Phoenician mobility in the Late Geometric Aegean had initially been associated with the Phoenician 'colonisation' of Kition,²¹⁰ which is traditionally dated to the late ninth century BC,²¹¹ although recent studies have proposed a significantly lower chronology.²¹² Yet rather than the consolidation of the Phoenician presence in Cyprus, it was the Assyrian expansion in the eastern Mediterranean littoral, under Tiglath-Pileser III (744–727 BC) and Sargon II (721–705 BC), which promoted the economic growth of the Phoenician cities, and Tyre in particular. In spite of the military pressure on coastal settlements, the Phoenicians became the main suppliers of primary raw materials for the vast Assyrian empire and were thus compelled to extend their trading sphere to a trans-Mediterranean scale. The archaeological and literary evidence seem to confirm a 'historic paradox', that the most aggressive period in Assyrian history was also the most beneficial for the Phoenician trading and colonising activity.²¹³ It is under this late eighth to early seventh-century dynamism that the Phoenicians are attested in the Dodecanese on a more stable basis. Noticeably, the same historic framework may have functioned somehow differently in the case of Cyprus. The Assyrian domination over the island in 707 BC, which may have temporarily shifted the focus of Cypriot trade, is perhaps the cause behind the abrupt withdrawal of Cypriot imports from late eighth-century Rhodes.²¹⁴

²⁰⁹ The participation of non-Phoenician traders is of course a valid hypothesis, although difficult to attest on archaeological terms. Hodos (2006, pp. 28, 64) has rightly criticised the tendency to view Mediterranean trade and interaction in bipolar terms of Greeks *v.* Phoenicians, which fails to take into account the activities of other Levantine populations such as the Aramaeans and other North Syrians.

²¹⁰ Coldstream 1969, p. 2: "Their earliest interest in Aegean trade would then be approximately contemporary with the foundation of the Tyrian colony at Kition."

²¹¹ It is now becoming evident that the transformation of Kition into a Phoenician city does not necessarily coincide with the earliest Phoenician pottery from this site. See Bikai 2003; Karageorghis 2002, pp. 144–149; Smith 2009, pp. 215–219.

²¹² Smith 2009, p. 218: "It would seem that this period, the very end of the eighth century BCE, is when Kition went from being a Cypriot city with merchant traders from the Phoenician heartland in residence to a Phoenician-administered city."

²¹³ Frankenstein 1979; Kestemont 1983; Botto 1990, pp. 21–34, 36–48; Hodos 2006, pp. 257f.; Aubert 2008, pp. 253–255.

²¹⁴ Bourogiannis 2009, p. 121. From the late seventh down to the end of the sixth century BC, Cyprus is again present in the material record of Rhodes. Throughout this period the sanctuaries of Rhodes display an impressive corpus of Cypriot (or Cypriot-type) limestone statuettes and terracotta figurines (Kourou *et al.* 2002; Karageorghis *et al.*, 2009).

Yet what sort of Phoenician presence does the material record imply?

The idea of resident Phoenicians setting up unguent factories in Cos and Rhodes and bottling their unguents in locally manufactured containers is of course not a new notion. It was proposed by Nicolas Coldstream in a number of influential studies that shaped our understanding of Phoenician mercantile activity in Cos and Rhodes.²¹⁵ Although Coldstream employed the same research hypothesis for both islands, he distinguished between the tendencies either to *Hellenise* the oriental ceramic prototypes, which is mainly attested in Middle- and Late Geometric Cos, or to closely copy them without further signs of interaction with the indigenous tradition. The latter is primarily seen among the Phoenician juglets of the early seventh century BC in Rhodes. Coldstream put forward a dual interpretation for this pattern. He associated the “Hellenised” neck-ridge juglets of Cos with Greek potters and the locally produced copies of eastern wares with foreign potters, either Phoenicians or Cypriots, who were employed by the Phoenician instigators of this enterprise.

Potters are perhaps the least glamorous examples of foreign, resident or itinerant craftsmen, an idea that has nevertheless been put forward for a growing number of sites, both in the Aegean and beyond.²¹⁶ Ivory carving and metalworking were of course highly esteemed in Late Geometric and Orientalising Greece, where big sanctuaries created an increasing demand for skilled craftsmen. Whether potters were also capable of participating in those transactions depended on the broader exchange mechanisms through which their skills were developed. The presence of foreign potters can easily be envisaged if their products were either profitable in themselves or if they facilitated a profitable activity. This seems to be the case with the mushroom-lipped juglets of Phoenician typology, either imported or locally made. Their shape and small size point towards a specialised usage, whereas their meticulous local reproduction indicates their utility as a recognisable ceramic symbol for a distinctive traded commodity, the unguents. The possibility that — at least during the earliest stages — these vessels were produced by Phoenician potters settled in Rhodes is hinted at by the absence of any signs of interaction with the local tradition. This ‘isolation’ of the new Phoenician type is better visualised and understood if examined in comparison with the preceding neck-ridge juglets of Cypriot typology, which were immediately adopted and displayed clear signs of mutual influence with the local Geometric style.

The Phoenician *metoikoi* of the early seventh century were members of a small Levantine community integrated within the Rhodian cities in the form of *enoikoismoi* rather than separate settlements. The memory of Phoenician settlers in Rhodes, which is preserved in the historiography of later periods,²¹⁷ may thus refer to this era. The special nature of their presence and commercial activities, largely instigated by local consumption mechanisms,²¹⁸ provides an explanation for their fragmentary attestation in the archaeological record of Rhodes: evidence of Phoenician cult, burial customs and

²¹⁵ Coldstream 1969; 1982; 1998; 2006.

²¹⁶ Ulf 2009, p. 113 n. 95.

²¹⁷ Bunnens 1979, pp. 152–153, 187–188, 207–208; Lipiński 2004, pp. 146–149. See also Guzzo 2008–2009.

²¹⁸ The steady demand for perfumed oils, an essential component of the daily life as well as the burial customs of Rhodes (and Cos), shaped the nature of Phoenician economic activities in this area; see Hodos 2010, pp. 19–23; Burns 2010, pp. 3–7.

table wares, which would imply a more permanent pattern of settlement, have hitherto not been produced on the island²¹⁹ but are attested in other parts of the Aegean, especially in Crete.²²⁰

The importance of unguent factories in seventh-century Rhodes is also reflected in the significant corpus of faience objects.²²¹ Although mostly produced in local workshops, the initial establishment of the faience industry in Rhodes should most possibly be attributed to Phoenician initiative and thus yields an additional, albeit indirect, hint for the considerable Phoenician penetration into the economic activities of the island. Significantly, the two Phoenician inscriptions from Rhodes also date to this period.²²²

The ‘cosmogony’ that took place in the Aegean in the course of the seventh century BC provided an excellent base for the enhancement of commercial interaction. The ability of the Phoenicians to stimulate and subsequently to take advantage of profitable markets contributed to and most probably accelerated the economic transformation of the Mediterranean. Yet in the seventh century BC the Phoenicians were not the only initiators of these ventures. Trans-Mediterranean contacts were firmly established and several trade spheres, not mutually exclusive, were activated.²²³ Ideally located along those multiple trading networks, Rhodes grew into a major contact zone, in which Phoenician activity and interaction flourished. The Phoenician mercantile community established on the island around 700 BC was part of an extensive system of exchanges. It is this mobility of people and ideas that would lead, just a few decades later, to the unprecedented orientalising revolution.

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²¹⁹ Regarding Phoenician table wares in particular, Gilboa *et al.* (2008, p. 191) notice that “Prior to the 8th century, Phoenician table wares were very simple, unadorned and apparently had no significant role in social negotiations. *Thus there is no reason to assume they would be used by ‘Phoenicians abroad’*, and surely could not have had any impact on ceramics elsewhere.” Furthermore, the occasional use of Phoenician-type coarse amphorae to contain inhumations of children (Coldstream 1969, p. 5 and n. 53) is most possibly related to the local burial custom of burying children in amphorae and pithoi rather than to similar inhumations in the Phoenician colonial cemeteries. One can also add that the regular material pattern of Phoenician burials (Aubet 2006) is not attested in Rhodes.

²²⁰ The small number of stone stelae of Phoenician typology (cippi) from Knossos and Eleutherna are among the strongest Phoenician evidence in the early seventh-century BC Aegean, even though most of them were found in second use or out of context (Kourou and Karetsou 1998; Kourou and Grammatikaki 1998; Stampolidis 1990; Kourou 2008b, pp. 355–356). Furthermore, the faience figurines from the tri-pillar shrine inside Temple B at Kommos on the south coast of Crete, which is the strongest—although still debatable—case of Phoenician cult in the Early Iron Age Aegean, also date to the Late Geometric period (see Shaw 2006 with further bibliography; Kourou 2008b, p. 355).

²²¹ Webb 1978, pp. 5–10. See also Bouquillon *et al.* 2007, p. 279; Caubet and Pierrat-Bonnefois 2005, pp. 128–134; Massar 2008.

²²² From Ialysos (Amadasi Guzzo 1987, pp. 16–17) and Vroulia (Riis *et al.* 1989, pp. 51–52, no. 34; Kourou 2003, pp. 255–256), both dating around the late seventh century BC.

²²³ The existence of multiple networks even within the same geographic entity is evident in Crete (Coldstream 2005).

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Urtian Irrigation Systems: A Critical Review

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Abstract

This article presents a systematic review of the geographic, archaeological and textual evidence for irrigation systems in eastern Anatolia during the period of the Urtian Kingdom (ca. ninth to sixth centuries BC). Inscriptions from large water management systems clearly date them to the reigns of individual named kings and identify these systems as being works of the Urtian central authority. However, it is suggested here that some water management systems may have been constructed by communal effort or on behalf of local rulers. It is also suggested that not all of the systems identified were necessarily used for the irrigation of arable crops, as the size and geographic location of some of these facilities suggest that they would have been of more benefit to pastoralists. The general conclusion that there was agricultural intensification during the period of the Urtian Kingdom remains the best interpretation of the evidence currently available, but this should now be modified to note that such works were not necessarily conducted by the Urtian state itself and that they may have been intended to facilitate the intensification of both arable and pastoral agriculture in the region. Issues of chronology, location and interpretation will continue to remain central to discussions of this subject.

Introduction

The geographical character of the Urtian territory is not inherently conducive to the intensive cultivation of cereal crops. This was made necessary during the period of the Urtian Kingdom (ninth–sixth centuries BC) by the growth of large urban centres and then only made possible by the construction of irrigation systems in the Lake Van basin and Ararat Valley.¹ This article will present a critical review of the evidence currently available for those systems. Specifically, it will seek to balance the available archaeological and literary evidence and try to understand these within the constraints of the geographical setting of Urtu (Fig. 1). In conclusion, this article hopes to offer an appreciation of the difficulties that such evidence presents when given closer analysis, especially with regard to dating these important archaeological features and, in some cases, their presumed function.

The following abbreviations are used throughout this article: ARAB: Luckenbill, D. D. 1926–1927 *Ancient Records of Assyria and Babylonia I–II*; CTU: Salvini, M. 2008 *Corpus dei testi Urartei*; UKN: Melikishvili, G. A. 1960 *Urartskie Klinobraznye Nadpisi*; Naval Int. Div.: *Naval Intelligence Division: Persia*, 1945; SAA V: Lanfranchi, G. B.; S. Parpola 1990 *The correspondence of Sargon II, Part II, Letters from the Northern and Northeastern Provinces*.

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¹ For example, Charles Burney has argued that with political stability in the Van region in particular, following the reign of Sarduri I (840–830 BC) the population of these areas must have been increased. He gives an estimated figure of fifty thousand for the city of Van. The creation of Toprakkale (Rusahinili *Qilbani-kai*) on the Van plain must have contributed further to the increase of population in Van region in the seventh century BC, during which time further new areas brought under cultivation (Burney 1972a, p. 183).

Geography and Hydrology of the Urartian Territory

Before discussing the archaeological and the textual evidence for Urartian water management systems, it is first necessary to establish the physical characteristics of the region as the rugged nature of the landscape inevitably placed limits on any settlement and agricultural activity that may have taken place there.² In particular, understanding the ancient climate, rainfall patterns and surface water hydrology of the region will be of most relevance to the subject of irrigation.

Pollen analyses from Lake Van suggest that although there had been significant climate changes from 13000 BC onward, from around 2000 BC increasingly arid conditions led to a climate very similar to that of the present day.³ The palynological evidence from the second and first millennia BC suggests that there was also a fluctuation in the level of humidity at this time. After a short period of a cold and humid climate, around 1000 BC there followed a warm and dry period with a low peak of humidity around 850 BC.⁴ Therefore, although the climate in the region had fluctuated, both before the Urartian period and after it, the scientific evidence appears to suggest that the climatic conditions were very much like those that can be observed there today and therefore useful observations of the landscape can be made that can inform our understanding of the physical environment in which Urartian water management systems were developed.

Prior to the formation of the Urartian state, in the highlands of eastern Anatolia, the Ararat plain of Armenia, and in northwest Iran, animal husbandry is presumed to have been the main economic activity for the local tribal communities of this area.⁵ However, with the rise of the Urartian Kingdom, there was an increase in cultivation and arable agriculture appears to have become as important as animal husbandry. When compared with other Near Eastern states, and the Neo-Assyrian and Babylonian Empires in particular, the amount of suitable land available for intensive cultivation in the Urartian territory was relatively small. Such small areas as there were would also have experienced a limited growing season of just a few months due to their high altitude and extreme climate.

The Urartian territory of eastern Anatolia, northwest Iran and Armenia can be presumed to have had adequate rainfall for agriculture in the late spring, in May and early June. It would also have received run-off from precipitation in neighbouring upland regions and it would have been possible to practice dry agriculture in some areas without irrigation. Although the available arable land in the region's small narrow valleys and alluvial plains is fertile⁶, successful agricultural intensification in the greater part of Urartian territory could not have been possible without effective irrigation. In these areas, including in the Ararat Valley, Lake Urmia, Lake Van and the Lower Murat River areas, some form of irrigation would have needed to be in place in order to sustain crops during the hot summer months.

A number of major rivers flow through the Urartian territory. These include the Araxes (*Manāša*) and Kura rivers, that flow towards the Caspian Sea, and the main tributaries of the Euphrates (*ḪD Purana*) such as the Murat (*ḪD Aršiani*) and Karasu, which flow south and form the

² Çifçi and Greaves 2010.

³ Wick *et al.* 2003, pp. 663–675.

⁴ Issar and Zohar 2007, p.194.

⁵ Diakonoff 1984, pp.78–81; Çifçi forthcoming.

⁶ Naval Int. Div. 1945, pp. 50–53; Atalay and Mortan 1997, pp. 327–329; Zimansky 1985, pp. 16–28.

Euphrates in the Elazığ Plain (Fig.1).⁷ These rivers and the numerous small streams of the mountainous regions of eastern Anatolia and north-western Iran are predominantly fed by meltwater from snow and heavy spring rainfall.

Year-round irrigation would have therefore required a large amount of retained water, for which this region is not particularly well suited. Lake Van, in the heart of the Urartian Kingdom, is situated at 1647 m above sea level and is fed by small streams from the basin around it.⁸ It is an endorheic lake (*i.e.* it is enclosed, with no outlets) and contains such high concentrations of sodium carbonate that their waters are highly alkali (pH 9.7–9.8) and are neither drinkable nor suitable for agriculture.⁹ Another large lake in the region, Lake Urmia, is saline and also unusable. The region's third main lake, Lake Sevan, is a freshwater water lake, but there is no archaeological or written evidence to indicate that the Urartians used its waters for irrigation. For this reason, the streams that ran off Ereğ Mountain (^{KUR}*Qilbanı*) (3200 m), which lies in the eastern part of the Van Plain, appear to have been one of most the important sources of water for the region, and were probably used by the Urartians during the first millennium BC.¹⁰

Given the natural climatic and topographic conditions of the Urartian territory and its resultant hydrology, let us now go on to consider the archaeological and literary evidence for the nature of ancient irrigation practice in the region.

Archaeological Evidence

In the Van basin and its surrounding areas irrigation canals and dams are observable that apparently date from the time of the Urartian Kingdom and these attracted wide academic interest during the second half of the twentieth century.¹¹ Perhaps the single most important contribution to this discussion has been the work of Oktay Belli, who undertook systematic research in eastern Anatolia to identify Urartian dams, irrigation systems, and reservoirs, with a particular focus on the agricultural infrastructure of the Lake Van basin (Fig. 2).¹² Belli's study provided much new primary archaeological evidence and has prompted further academic research and discussion.¹³

Belli observed that a correlation is apparent between the location of Urartian period defended structures and the provision of water facilities. He inferred from this observed pattern of distribution that the Urartians constructed their fortresses close to these water facilities in order to manage, maintain and protect them.¹⁴ As examples of this, Belli cited the Aşağı Kevenli fortress that lies close to the Kilise Gölü dam; Yukarı Kevenli fortress that is close to the Kevenli dam; and the site of Zivistan that is near the Azab reservoir.¹⁵

⁷ Atalay and Mortan 1997, pp. 312–313.

⁸ The level of Lake Van has fluctuated over time in response to changing environmental factors. Kadioğlu *et al.* 1997; Wick *et al.* 2003; Kuzucuoğlu *et al.* 2010.

⁹ Degens *et al.* 1984; Eimanifar and Mohebbi 2007.

¹⁰ Belli (2001, p. 359) states that he identified 14 dams and reservoirs of Urartian period around Ereğ Mountain.

¹¹ Laessøe 1951, pp. 21–32; Harutjunjan 1964, pp. 11–53; Ögün 1970; Burney 1972a, pp. 179–186; Garbrecht 1980, pp. 306–312; 1988, pp. 185–198; Zimansky 1985, pp. 66–70.

¹² Belli 1994a, pp. 9–30; 1994b, pp. 77–115; 1997; 1999, pp. 11–26; 2001, pp. 358–364.

¹³ For example, Salvini 2001, pp. 143–155.

¹⁴ Belli 1994b, pp. 92, 94, 105; 1999, p. 20.

¹⁵ Belli 1994a; 1994b; 1999.

One of the most interesting sites relating to the development of Urartian water facilities is that of Lake Aygır in north-western Van. Here terracotta water pipes and stone channels were laid down in order to carry water out from the artificial lake.¹⁶ The excavator of Anzavurtepe, Kemal Balkan,¹⁷ has also made mention of similar terracotta pipes, and proposed that they were used to collect water for the citadel from the Kumocağı stream that runs some two kilometres to the east of the site.¹⁸ A recently discovered water reservoir to the east of Ayanis Fortress, 2002 m above sea level, is also believed to have supplied water to the lower town and citadel of Ayanis by means of a system of stone pipes.¹⁹

Since irrigating the arable lands around Lake Van (*i.e.* the Van, Muradiye, and Gürpınar plains) from the region's natural water body was not feasible, it was evidently necessary for Urartian kings from the reign of Minua onwards to construct artificial reservoirs in order to irrigate the fertile soils of these areas. These kings then recorded their construction works by means of inscriptions that commemorated their great feats of construction (see below). Examples of these artificial reservoirs include the Upper Anzaf dam built by king Minua to the east of Upper and Lower Anzaf Kale.²⁰ This dam was fed by rain and spring meltwater from the nearby mountains and was evidently intended to supply water for the lands around the citadel.

There are generally few archaeological data regarding the construction of canals or reservoirs from northwest Iran. At Bastam, however, Wolfram Kleiss has noted the importance of the Aq Çay's water for the Qara Zia Eddin plain, and the presence of a canal here, which he suggests might be Urartian in date.²¹ This canal was evidently constructed to artificially irrigate the land around Bastam. Furthermore, in the Solduz valley, where the site of Hasanlu (^{URU}*Mešta*) is located, Vaughn E. Crawford has identified a network of irrigation canals that indicate that the Gadar River played a crucial role in this area's agricultural activities.²² However, it cannot be conclusively proven that the canals mentioned by Crawford were used during the Urartian period. Finally, it appears that a canal that provided water to the Urartian site of Qaleh Ismail Aga from the Nazlu Çay is still in use today.²³

The archaeological evidence for irrigation systems, although not plentiful, does suggest that at a number of key sites and regions within the Urartian territory major works had been conducted to supply key sites and areas of fertile land with water.

Textual Evidence

Cuneiform inscriptions indicate that king Minua was actively engaged in the construction of water reservoirs (*šu-e*), fountains (*ta-ar-ma-ni-li*)²⁴ canals (*pi-li-e*) and cisterns (*gie*)²⁵ at his

¹⁶ Belli 1994b:108–109, fig. 29:2, 31: 1–2, 32.

¹⁷ Balkan 1960, p. 137.

¹⁸ Balkan 1960, p. 137 n. 17.

¹⁹ Altan Çilingiroğlu speaking at International Symposium on East Anatolia – South Caucasus Cultures, Erzurum/Turkey, 10 October 2012 and *pers. comm.*

²⁰ Belli 1994b, pp. 82–84.

²¹ Kleiss 1980, p. 299.

²² Crawford 1961, p. 85.

²³ Silenzi 1984, p. 218.

²⁴ Van Kalesi CTU A 5–58A–B–C/ UKN 92 a–c; Ain-e Rum CTU A 5–5 9 A–D.

²⁵ Until recently, it was widely assumed that the term *gie* in the Bostankaya inscription of Minua refers to storage facilities for liquids. But *gie* has recently been proposed by Mirjo Salvini as being a word for a cistern for the storage of

capital of Tušpa and elsewhere. This was evidently one of the king's priorities, as he controlled extensive territory with an already large and growing population, and increased agricultural production in the central part of his kingdom would have been essential for sustaining his people.

One of Minua's greatest engineering achievements was the construction of the Minua Canal (*^mMi-nu-a-i pi-li-e*), which runs for some 51 km from the Mount Başet area of the Artos Mountains to the city of Van (Fig. 2). The water that feeds the canal begins as a spring in the village of Yukarı Kaymaz, which then forms a stream that runs to the Hoşap (Engil) Çayı, and from there it is then transported by an aqueduct over the Hoşap into a canal that averages between 3.5 to 4 m wide and 1.5 to 2 m deep. The average flow of water is estimated to have been between 3 to 3.5 cubic metres per second.²⁶ A managed water flow on this scale was greater even than that of the largest aqueducts in the city of Rome at the peak of its population in the first century AD.²⁷ For the most part, the canal was carved into solid bedrock and in areas of steep valleys and slopes at points its walls can measure up to 11 m high (Fig. 3). The Minua Canal helped to ensure the successful development of agriculture, horticulture and viticulture in the central areas of the Urartian Kingdom and, remarkably, it is still in use today approximately 2800 years after its construction.

There are 14 inscriptions visible along the course of the canal, stating that it was constructed during the reign of king Minua (Table 1). Most of these inscriptions are located in the Kadembastı Mevkii and Edremit districts. One example reads:

Thanks to the power of Haldi, Minua son of Išpuini constructed this canal. 'The canal of Minua' is its name. By virtue of the greatness of Haldi (I am) Minua, powerful king, great king, king of the land of Biainili, ruler of the city of Tušpa.

Minua says: whoever destroys this inscription, whoever damages it, whoever else causes these things to be done, whoever else says: "I constructed this canal", he will be annihilated by Haldi, Teişeba, Šivini and (all) of the gods under (the light) of the sun (CTU A 5-12C / UKN 45).

This inscription from Aşağı Kaymaz states clearly that Minua built this canal, which is named after him, and this statement is then followed by a curse formula addressing anyone who might wish to destroy the inscription and royal title (Table 1).²⁸ By constructing a canal on this scale, it is clear that Minua's intention was not only to provide water to the city of Van, but to perhaps also supply the agricultural needs of the population over vast areas to the south and south-east of the city, presumably watering numerous vineyards, orchards and fields.

For his royal city of *Rusahinili Qilbani-kai* (Toprakkale), close to Ereğ Dağ mountain to the east of the Van Plain, king Rusa III son of Erimeña²⁹ constructed one of the largest reservoirs in

water (2001, P. 144; 2010, P. 362). In support of his argument Salvini points out that at Bostankaya, which is the location of this inscription (CTU A 5-67 / UKN 79), there are two rectangular cistern mouths cut into the rock for rainwater, dismissing the idea that *Ē gie* represents storage for liquid.

²⁶ Ögün 1970, p. 12.

²⁷ Anio Novus approximately 2.27 m³ per second; Aqua Marcia approx. 2.25 m³ per second; Aqua Claudia approximately 2.21 m³ per second, see Blackman 1978; Bono and Boni 1996.

²⁸ The content of CTU A 5-12A-D / UKN 43-46 and CTU A 5-14A-D, CTU A 5-15A-E / UKN 48-56 are identical. For example the phrase 'thanks to the power of Haldi, Minua son of Išpuini, has built this canal. "Canal of Minua" is its name' is given in both CTU A 5-14A-D and CTU A 5-15A-E.

²⁹ The chronology of Urartian kings and the position of king Rusa son of Erimeña in particular has been widely discussed by scholars. In the proceedings of the *Biainili-Urartu* symposium in Munich the possible kingship of Erimeña

the Lake Van basin, called ‘Lake Rusa’ (*^mRu-sa-a-i şu-e*) (modern Keşiş Göl).³⁰ Until the recent discovery of the Gövelek inscription³¹ it was generally accepted that the king Rusa mentioned in the Keşiş Göl inscription was Rusa II son of Argišti II, who had constructed the reservoir mentioned in that inscription (Fig.4).³² However, both the Gövelek and the Keşiş Göl inscriptions³³ state that Rusa III was the builder of the reservoir and that he dug a canal to his new city, irrigating newly established vineyards, orchards, and fields along its length. Furthermore, the inscription states that he diverted some of the water from the ‘Alaini River’³⁴ to the city of Tuşpa.³⁵

Rusa, son of Erimena says: before the land in front of Mount Qilbani was wilderness, with nothing, not even a field of grain nor a vineyard was there. No canal had been dug there. As the god Haldi gave me the order, I carried out great works here. ... In truth I dug the area inundated by this lake: it was empty (?); nothing, not even (a field of) grain was here... a road was here, no canal was delineated, no fountain existed here. The mountains were enclosed possessing... waters which... and... I imposed the name of ‘Lake of Rusa’. I created a canal from here to Rusahinili. ...

Rusa says: when Rusahinili constructed, when I created this lake I brought workmen from the city of Tuşpa; (these) dug... the earth before Rusahinili and the place of this lake in truth was wilderness (and) empty(?). The workmen who dug (?) all the works... bronze... placed.

Rusa says: I planted in this same land vineyards, groves, fields of grain, great projects which I carried out here. So this lake for Rusahinili be abundant (?). From/to Rusahinili ... waters of the lake... towards Rusahinili, waters of the river Alaini, Tuşpa...waters to/from Rusahinili. (CTU A 14-1 / UKN 268).

To the northwest of Lake Rusa (Keşiş Göl) there is another large reservoir called the Sihke dam.³⁶ The Sihke dam was evidently formed out of one of the slopes of Erek Mountain to check the strong flow of water from Lake Rusa and irrigate the land extending towards Tuşpa.

Uartian cuneiform inscriptions regarding the territory lying to the northeast and northwest of Lake Van, in the area around Erçiş and Muradiye, indicate that Uartian kings were concerned with the development of these plains and built new settlements, water reservoirs and canals to supply the towns located here. For example, on the Gürpınar Plain the Çavuştepe

and his son Rusa were discussed by Mirjo Salvini (2012, pp. 111–134), who accepted the traditional dating in which Rusa son of Argišti ruled before Erimena and his son, also called Rusa; while Ursula Seidl (2012, pp. 177–181) argued that Rusa son of Erimena should be dated earlier than Argišti son of Rusa and therefore suggested that he ruled between Rusa son of Sarduri and Argišti son of Rusa. Stephan Kroll (2012, pp. 183–186) and Ursula Hellwag (2012, pp. 227–241) suggested that Rusa son of Erimena was earlier than Rusa son of Argišti and Andreas Fuchs (2012, pp. 135–161) argued that Rusa son of Erimena ruled between Argišti son of Rusa and Rusa son of Argišti. The precise dating and relative order of reigns of the Uartian kings in this period therefore remains an open and very actively discussed area of academic debate.

³⁰ Prior to the discovery of Gövelek stele, the name of Rusa III son of Erimena was only known to appear on 15 bronze objects from Toprakkale and on inscriptions from Arinberd (CTU A 14-6 / UKN II 458) and Armavir (CTU A 14-5 / UKN 288).

³¹ Salvini 2002, pp. 115–143.

³² Belli 1994b, 109–111; 1999, pp. 20–23; Burney 1972a, p. 183; Garbrecht 1980, pp. 310–311; 1988, pp. 191–197; Ögün 1970, pp. 24–27.

³³ Salvini (2006, pp. 212–214) points out the similarities to both inscriptions and suggest that Gövelek and Keşiş Göl stelae are in fact parts of the same inscription, which he calls Keşiş Göl 1, and Keşiş Göl 2.

³⁴ Ögün (1970, p. 25 n. 56) suggests that *Alaini* should be identified with the Değirmendere Çayı.

³⁵ Garbrecht 1988, p. 192.

³⁶ Belli 1994b, pp. 109–112.

temple inscription indicates the construction of canals for irrigation.³⁷ Similarly, references to the construction of canals for irrigation have come from the Tirmıklı Kilisesi (Artsovaşerd) inscription in the Erçiş Plain;³⁸ Karahan³⁹ and Muradiye⁴⁰ in the Muradiye Plain; and Adalak⁴¹, Hotanlı⁴², and Koçaklar (Marmos)⁴³ in the Malazgirt Plain (Table 1).

An inscription found on Akdamar Island near the southern shore of Lake Van, which was clearly not *in situ*⁴⁴, states that Minua constructed canals in the territory of *Ahiunikani*, in Minuaşinili, in Aiduni and in the land of *Uişini* (Uishini).⁴⁵ The city mentioned by the Assyrian king Sargon II in his eighth campaign was named as *Uajais* and also appears in numerous Assyrian letters as the variants *Ueši* and *Uaši*.⁴⁶ The city was evidently associated with the Urartian army and *Uajais* was mentioned as a *nagu* (province) of Urartu by Sargon II. A damaged inscription of Minua from Qalatgah also mentions a city called *Uişe* in an unknown context (CTU A 3–10 line 5). However, the great distance that lies between the find spot of the Akdamar inscription and the site of Qalatgah in north-western Iran and the different written forms of *Uişin*, *Uajais*, or *Uişe* cast some doubt on the idea that these names should be identified with a single city. It is therefore perhaps possible that there were actually two different cities, with one named *Uişini* and the other known as *Uajais* or *Uişe*. Therefore, one might accept a location for the latter in Qalatgah in the Ushnu Plain, as suggested by Zimansky and others⁴⁷ and for the former, a location either on the eastern or south-eastern shore of Lake Van basin in the vicinity of Gevaş has been suggested.⁴⁸ However, it is also known that Urartian kings spoke about their various construction works in the same context, as in the case of Akdamar inscription, where Minua also mentions canals that he built in different locations such as *Ahiunikani*, *Minuaşinili* and *Aiduni*. Therefore, it is still possible that the city of *Uajais* / *Uişe* or *Uişini* is located in northwest Iran at Qalatgah.

³⁷ This is the inscription that mentions the building of Irmuşini temple and city of Sarduruşinili (Çavuştepe) by Sarduri II and an construction of canal from *Gugunai River* [Hoşap Irmağı] (CTU A 9–17).

³⁸ ‘... Thanks to the might of Haldi, Minua, son of Išpuini says: “I have cut a canal from the city of Alia, from the source of the god Quera, I led it up to the Dainalinitini (River). Minua has cut a canal, constructed a city”, CTU A 5–17 / UKN 58. Burney suggests that the name of the river *Dainalinitini* (Dainala) should be identified with the Zilan Deresi in Erçiş (1972a, p.182). For its location, see also Zimansky 1985, p. 119 n. 131.

³⁹ Dinçol and Kavaklı 1978, pp. 19–23, n. 3.

⁴⁰ CTU A 5–16 / UKN 57.

⁴¹ CTU A 5–20 / UKN 59.

⁴² CTU A 5–21 / UKN 60.

⁴³ CTU A 5–22 / UKN 61.

⁴⁴ Giorgi A. Melikishvili has suggested that the inscription might originally have come from the vicinity of Dilkaya (Hurkum), 15 km south west of Edremit (Melikishvili 1960, p. 177; Diakonoff and Kashkai 1981, pp. 5, 4, 100), whereas Paul Zimansky (Zimansky 1985, p. 67) has argued that the name of *Uişini* should be identified with the site of Qalatgah in northwest Iran from where he believes the inscription originated.

⁴⁵ [...] the city of Ahiunikani near the land of Erinui, and the city of Minuaşinili. I arrived at the river of (?) the land of Aiduni; in (?) the entire place I cut a canal. (For the) city of Uişini, for the entire place, I cut a canal. Minua says: [...] (CTU A 5–23 Vo / UKN 62).

⁴⁶ SAA V 86:9, 87:5, 89:10, 93:2, 112:3, 133:12, 164:7, 167:3.

⁴⁷ See also Muscarella (1986, pp. 472–75) who identifies Uasi/Uajais with Qal’eh Ismail Aqa in the Urmia plain; whereas Pecorella and Salvini (1982, pp.16–17), Kroll (2011, p. 157), Wilson (1960, pp. 109–110), van Loon (1975, pp. 206–207) and Zimansky (1985, p. 112 no 64; 1990, pp. 16–17) identified it with the plain of Ushnu and located it at Qalatgah.

⁴⁸ Maurits van Loon, who published the Qalatgah inscription also argued for the possibility of an ‘Old Uajais’ and existence of a city called Uishe on the south shore of Lake Van (van Loon 1975, p. 205).

On the reverse of the Çelebibağı inscription and the front of the Topraklı (Hagi) inscriptions, Argišti II states that after he had ascended to his father's throne, he engaged in construction activities in the area around modern Erçiş, where he built a city in his own name and a reservoir and water canal to irrigate the surrounding areas, as follows:

Argišti says: near the city of NA₄.ANŠE, before Mountain Quria, the earth was wilderness, nothing, neither fields of grain, nor vineyards, nor orchards were there, no canal was cut; As soon as Haldi ordered it, I created Asuaḫina Lake (CTU A II-1 / UKN 275).

I founded villages (cities) here. I made men... from the city of Argišthinili⁴⁹ before Mountain Artarapša. Argišti, son of Rusa, says: of these same villages (city) this canal constitutes fertility(?). There was absolutely(?) no... order for these same villages... both the waters of the lake... of this same valley(?) as well as the fertility(?) wealth(?). ... Argišti says: the river before (?) the city(?) of Ali(?)... to give(?), ... to order(?) the vale(?) of the valley(?) of Argišti. (CTU A II-2 / UKN 276)

The Urartian presence in Transcaucasia and the Lake Sevan basin began with the construction by Minua of the city of Minuaḫinili (modern Taşburun) between Mount Ararat and the Araxes River. It was king Argišti I who first brought the Ararat valley and Lake Sevan basin under the control of the Urartian Kingdom. In the Sardarabad inscription he states that he built four canals from the left bank of Araxes in order to bring water to the city of Argišthinili⁵⁰ (modern Armavir) and to the Araxes valley. Furthermore, the Horhor Chronicle⁵¹ and the Surp Sahak Kilisesi⁵² inscriptions indicate that Argišti I also constructed a canal from the Manaša (Araxes) River to the land of Aza.

As in the Van Plain, intensive cultivation in the Ararat Plain required the Urartians to establish adequate irrigation in order to support it. Rusa II constructed a canal in the vicinity of Karmir-Blur⁵³, which is commemorated in the Zvartnots⁵⁴ inscription and was known as 'Umešini'.⁵⁵ This canal ran from the Ildarunia River (modern Hrazdan) and was intended to provide water to the uncultivated valley of Qublini, where Rusa claimed to have established vineyards, orchards and fields of crops (this can be identified with present day Etchmiadzin in Armenia). Along the right bank of the river, the canal passed through a 280 m long andesite-basalt rock tunnel and into the Etchmiadzin region.⁵⁶ It is also interesting to note that when the canal was used for the irrigation of fields, sacrifices were made to the supreme triad of Urartian gods; Haldi, Teišeba and Šivini, as follows:

To the god Haldi, his lord, Rusa, son of Argišti, has erected this stele. By virtue of the might of Haldi, Rusa, son of Argišti, says: The valley of the country of Qublini was empty, nothing was there;

⁴⁹ The city of *Argišthinili* (Soğucak/Kepenek-Muş = CTU A 8-22) not to be confused with *Argišthinili* (Armavir) in Armenia.

⁵⁰ 'Thanks to the might of Haldi, Argišti son of Minua speaks: A perfect fortress I have constructed, I gave it the name of Argišthinili. The land was wasteland, nothing was constructed there. From the river I cut four canals, I planted vineyards and vegetable gardens. (Great) works I carried out here' (CTU A 8-16 / UKN 137).

⁵¹ CTU A 8-3 IV line 72-73 / UKN 127 IV.

⁵² CTU A 8-2 Ro / UKN 128 B2 41-42.

⁵³ Piotrovsky 1969, fig. 31.

⁵⁴ Zvartnots is 20 km west of present day Erevan. Piotrovsky believes this stele stood once near the Urartian city of *Teišebani* (Karmir-Blur) (Harutjunjan 1964, p. 47).

⁵⁵ CTU A 12-8 line 15 / UKN 281.

⁵⁶ Hovhannissian 1973, p. 12.

as the god Haldi commanded it, I planted this vineyard, (also) I planted a field of grain and an orchard. I established new settlements here, I cut a canal called Umešini from the River Ildarunia in this same valley of Rusa.

When the canal flows, a goat must be sacrificed to Haldi, and a sheep must be sacrificed to Haldi, and a sheep to the god of the Teišeba, and a sheep to the god of the Šivini (CTU A 12–8 / UKN 281).

Although there are no Urartian inscriptions that relate to reservoirs or canals in north-western Iran, as mentioned above, there is an inscription of Minua from Ain-e Rum/Ezdaha Bulaqi 18 km north of Ushnaviyeh Plain, near Qasemlu Čay, which mentions the construction of a fountain.⁵⁷ However, the Assyrian king Sargon II's eighth⁵⁸ campaign against Urartu in north-western Iran provided a description of the water supply system that had been built by Rusa I at the city of Ulhu⁵⁹ in Sangibatu province in a letter to the god Assur, as follows:

The city of Ulhu, a stronghold at the [foot of Mount Kishpal]... and their people like fish... they did not drink, they did not satisfy their hunger... ... Ursa,[Rusa] their king and counsellor, following [his heart's] desire... showed (them) where the water gushed forth. A ditch, carrying these flowing waters; he dug and... ... brought plenty, like the Euphrates. He made numberless channels lead off from its bed... The canal which protects it, — its flow(?) I blocked and the water... ... I turned into a morass (ARAB II 160–161).

Sargon II's account claims that the province of Sangibatu, and in particular, the land around Ulhu, was transformed from a desert into one of the richest agricultural areas in the Urartian territory during the 8th century BC.

To summarise the textual evidence for Urartian irrigation systems, it can be seen that the most common form of evidence is monumental inscriptions erected by various kings, which are often formulaic and commemorate their construction of major water canals that facilitated the cultivation of previously uncultivated land by means of new fields, vineyards and orchards. These canals are also often associated with the foundation of new cities by those same kings, as part of larger programmes of building and settlement.

Discussion

Where the constructed irrigation and water management facilities named in specific inscriptions can be identified, such as Lake Rusa and Minua Canal, these are of an impressive size and character. However, it should not be assumed that all Urartian water facilities were necessarily constructed on such a scale.

⁵⁷ CTU A 5–59 A–D.

⁵⁸ Zimansky 1985:40–47; 1990:1–21; Levine 1977:135–151; Muscarella 1986: 465–475.

⁵⁹ Reade (1978, p. 140) and van Loon (1966, p.18) argue that Ulhu should be located in the Marand plain, whilst Laessøe (1951, p. 21, n. 2), Wright (1943, p. 185, n. 57) and Burney (1972b, p. 140) suggest a location in the Marand plain close to Ulagh. Muscarella (1986, p. 469) identifies the site of Qalatgah in the north-western Iran with the city of Ulhu. However, Zimansky (1990, p. 19) challenges Muscarella's identification, favouring instead the site of Qotur [Khoy Plain] as the location of Ulhu.

For example, in 1951 it was argued by Jørgen Laessøe⁶⁰ that Sargon's description of his destruction of the Ulhu water system should be identified with present day water systems known as *qanat*.⁶¹ It has been suggested that such systems may have originated in Iran as far back as the first millennium BC.⁶² *Qanat* systems collect ground water using a network of horizontal underground tunnels, which is then accessed at key points via vertical shafts.⁶³ They are still widely used across the Near East today.⁶⁴ Since Laessøe⁶⁵ suggested that the Urartians may have used similar *qanat* systems at Ulhu, the possibility of Urartian *qanat* systems has been discussed by scholars of the ancient Near East.⁶⁶ Recently, Mirjo Salvini has argued that the canal and irrigation systems of the Urartian period were a uniquely local development that differed from the *qanat* systems known elsewhere in the Near East.⁶⁷ Stephanie Dalley⁶⁸ has also pointed out that the meaning of the words *silittu* (now taken to mean a branch of a canal) and *išqillatu* (meaning pebble) were not known when Laessøe proposed this *qanat* theory, to which the interpretation of the word *išqillatu* as a shaft is central.⁶⁹ Salvini and Dalley have therefore concluded that the Ulhu passage of Sargon II's account in fact refers to a network of open canals and not a *qanat*-style underground system.⁷⁰ The precise reconstruction of these systems remains an open item of debate, although the evidence for royal involvement in the construction of large-scale open canal systems and reservoirs is clear.

Charles Burney has discussed the possible motivations behind these Urartian rulers' engagement in the construction of artificial water facilities. He cites various possible reasons for this royal involvement, including the growth of population, decline of rainfall and political reasons.⁷¹ With the political situation around the Lake Van basin being stable, there was evidently an increase in the number of settlements during the Urartian period. This is in contrast to the preceding second millennium BC, when there were evidently fewer settlements here.⁷² These new settlements would have required the provision of drinking water and large areas of cultivable land which, given the natural climate and hydrology of the region, meant the provision of irrigation systems.

There is no doubt that Urartian kings were actively engaged in the development of irrigation facilities in their newly conquered lands. By analysing the written sources from the Urartian state,

⁶⁰ Laessøe 1951, pp. 21–32.

⁶¹ Laessøe works on the assumption that in line 203 of Sargon's letter a noun of feminine gender, possibly the word *ḫirītu*, is hidden, and should be restored in this section of the text with the word *ḫirītu* which is found in lines 221–223. This restoration led him to interpret *ḫirītu* as meaning a *qanat*. He also gave the same meaning to the phrase *mūšê māni* (water outlets).

⁶² Mays 2010, pp. 3–4.

⁶³ Hovhannissian (1973, p. 12) mentions a canal called Dalma in Armenia to be a *qanat* and states that the Urartians built similar underground water systems.

⁶⁴ Ögün (1970, pp. 14–15) mentions eight *qanat*-style undergrounds (*kerhiz*) in the Van Plain and states that there is no evidence to associate their construction with Urartu.

⁶⁵ Laessøe 1951, pp. 21–32.

⁶⁶ Dalley 2005, p. 40; 2002, pp. 446–448; Muscarella 1986, pp. 468–469; Zimansky 1985, p. 119, n. 128; Salvini 2001, pp. 143–155; Burney 1972a, p. 181.

⁶⁷ Salvini 2001, pp. 143–144.

⁶⁸ Dalley 2002, pp. 446–448.

⁶⁹ Dalley 2002, p. 447.

⁷⁰ Salvini 2001, p. 145; Dalley 2002, p. 448.

⁷¹ Burney 1972a, pp. 180–83.

⁷² Özfirat 2006; 2007.

it seems that in parallel with the expansion of their state boundaries, Urartian rulers engaged in rebuilding activities in specific areas. Building inscriptions that relate to the construction of water facilities are confined to the reigns of Minua, Argišti I, Sarduri II, Argišti II and Rusa III and are mostly located in the Lake Van basin and Ararat Plain (Table 1). There is only one inscription that mentions the construction of a reservoir and canal by Rusa III,⁷³ whereas Minua evidently constructed the most water facilities. Interestingly, with the exception of a fountain at Ain-e Rum near Lake Urmia, the water facilities constructed by Minua appear confined to the Lake Van basin, which reflects the boundaries of the Urartian Kingdom at that time. By contrast, the water facilities constructed by Argišti I, Sarduri II and Argišti II extended across the Ararat Plain and the Lake Van basin. It is, however, interesting to note the absence so far of either archaeological⁷⁴ or textual evidence for Urartian water facilities in the Elazığ Plain and its environs, which stands in contrast to other archaeological remains and texts that suggests that the number of settlements increased in the Elazığ region and its vicinity under Urartian rule.⁷⁵

One of the abiding difficulties in identifying the archaeological remains of Urartian canals and reservoirs is that, apart from isolated examples (*e.g.* Lake Rusa, the Minua Canal) it is hard to conclusively assign many of them to the Urartian period. Some of the identified examples may only have been built during the Byzantine (for example the Faruk Bendi dam⁷⁶) and Ottoman periods, or re-built on pre-existing Urartian foundations (such as the Doni reservoir).⁷⁷ Therefore, cuneiform inscriptions that relate to such features are a particularly valuable source of evidence because of the lack of unequivocal dating evidence for the facilities themselves.

The survey of water facilities in the area around Lake Van by Oktay Belli remains the single most important study of these structures.⁷⁸ In his survey Belli identified 115 dams, water reservoirs and canals in eastern Anatolia, including two of them in Nakhichevan,⁷⁹ all of which he claimed to be of Urartian date.⁸⁰ The Urartian period was clearly an important one within the history of eastern Anatolia, but it is not the only one. Without firm dating evidence, in the form of inscriptions or absolute methods of archaeological dating, they cannot be firmly tied into the reigns of specific Urartian kings, or even to the Urartian period at all. There is no doubt that the Urartians did play an important role in construction of many of these water installations and others like them but the lack of secure dating evidence will remain a frustration to further research into this subject. However, the automatic presumption that any major water system in the region must be Urartian in date simply because this period of the region's history is well-documented and relatively well understood should now be questioned and secure dating for these structures should be sought whenever possible.

⁷³ CTU A14-1 Ro.

⁷⁴ Sevin 1986; 1987; 1988.

⁷⁵ Palu (CTU A 5-5 / UKN 39), Bağın (CTU A 5-8 / UKN 42), İzoli / Habibuşağı (CTU A 9-4 / UKN 158), Bahçecik (CTU A 9-18) and Mazgirt-Kaleköy (CTU A 12-6 / UKN 279) inscriptions from Elazığ and its environment as well as Patnos Aznavurtepe (CTU A 5-11A), Argišti Annal (CTU A 8-3 II / UKN II 127 II), Surb Sahak (CTU A 8-1 Vo / UKN 128 A2), Surb Pogos (CTU A 9-1 Vo / UKN 156 C) inscription that mention the activities of Urartian in the region.

⁷⁶ Garbrecht 1988, p. 195.

⁷⁷ Belck 1904, p. 192.

⁷⁸ Belli 2008.

⁷⁹ Autonomous Republic of Nakhichevan, is a constituency of the Republic of Azerbaijan.

⁸⁰ Belli 2008, p. 307.

There is also evidence of dateable pre-Urartian systems that should give us further cause to question the default assumption that all major water management facilities and irrigation works must date from the Urartian period. This includes the stepped check dams and mudbrick sluices, intended to reduce the effects of water rushing down from the mountains, and a series of simple canals for irrigation dating back to the third millennium BC at the site of Mokhra-Blur in Armenia.⁸¹ There is also evidence of small and large artificial water reservoirs around Mount Aragat dated to the fifteenth and fourteenth centuries BC and other water facilities around the Ararat valley.⁸²

Even the reliability of our key dating evidence, written Urartian sources relating to the development of canals and reservoirs, need to be cautiously examined. These inscriptions often claim that ‘the land was uncultivated’, ‘nothing was built there before’, or the ‘the land was deserted’ prior to the provision of any new water facility or settlement. However, the language of these inscriptions often appears formulaic and the true state of the land prior to their construction cannot be proven. It is also possible that during military campaigns water management facilities could be destroyed, as they evidently were when the Urartian city of Ulhu was sacked by Sargon II, especially in the areas of north eastern Anatolia (Diauehi) and Transcaucasia (Qulha, Taruini and Etiuni) where resistance to Urartian expansion had been encountered. These inscriptions may, therefore, denote the restoration of damaged irrigation systems, rather than the construction of entirely new ones.

In addition to the question of when these works were constructed, there is also the matter of who built them. Urartian monarchs may indeed have been active in the construction of such prestigious facilities as Lake Rusa and the Minua Canal, but it is also possible that other works were built by local aristocracies or powerful tribal leaders without direct state involvement.⁸³ If one considers that the Urartian Kingdom was composed of many different tribes,⁸⁴ then it is reasonable to assume that at least some of the canals and reservoirs recorded by Belli may have been constructed by local authorities independently of the monarchy. Examples of such independent building activities have been identified by Kemalettin Köroğlu,⁸⁵ who re-examined the sites of Yoncatepe and Patnos/Giriktepe (Değirmendere), and suggested that the citadels here had been

⁸¹ Issar and Zohar 1997, p. 198.

⁸² Issar and Zohar 1997, p. 198.

⁸³ Recently Köroğlu (2012, pp. 149–157) has argued that Urartian settlements can be categorised into three different groups, namely cities, local administrative centres and rural settlements. In Köroğlu’s three-tiered system cities are those settlements that were designed and constructed by the central government and consisted of a citadel and a lower town, probably being directly ruled by a member of royal family. Typically, citadels contained palaces, temples, storage facilities, and cisterns. Most importantly, with the exception of Van Kalesi (Tuşpa) there are no multi-roomed rock-cut tombs in cities and which displayed altered topography. On the other hand, the local administrative centres are distinguished by the fact that no effort was made to alter the topography of the crags on which these centres were built and their shape was dictated by the natural shape of the outcrop. Also walls were built around the edges and most importantly there are multi-roomed rock-cut tombs within the citadels walls. The semi-nomadic tribes of the Early Iron Age survived and integrated themselves into Urartian Kingdom and these local administrative centres were built by such local tribal leaders. The multi-roomed rock-tombs may have been imitated by local rulers and they indicate the social status of their owners. Rural settlements, or villages, were usually built on a high position, like citadels, but without surrounding walls. They probably belonged to local feudal lords.

⁸⁴ Diakonoff 1984, pp. 69–78, see also Erdem (2011, pp. 59–68) who argues that the semi-nomadic tribes of Early Iron Age eastern Anatolia probably continued to exist during the Urartian period.

⁸⁵ Köroğlu 2009, pp. 383–394.

built by local rulers rather than the central state. Köroğlu has named these citadels *Bey Konağı* or 'Lordly Houses'. Following Köroğlu's line of interpretation, the Harabe and Bakraçlı dams that were originally investigated by Belli⁸⁶ and which are located close to the Yoncatepe citadel, can also be interpreted as having been built by a local ruler, or rulers.

Some reservoirs might also have been constructed as a result of local communal effort, particularly in rural areas where there is no evidence for major citadels that might belong to the state or be the seat of a *Bey Konağı*. One such example is the Gelincik dam, situated 140 km southeast of Van close to the border of modern Iran.⁸⁷ The nearest known Urartian period settlement is located approximately 60 km south east of Gelincik, at Yeşilalıç, where a sanctuary in the form of a door-shaped niche and a fortress dating to the co-regency of Išpuini and Minua are located.⁸⁸

When the geographical realities of the locations of some of these water facilities are taken into account, and in combination with ethnographic observations, the question of precisely what these structures are must also be addressed. For example, in the Lake Van basin Belli himself observed farmers using the beds of some of these water facilities to grow grass by blocking off the sluice from early spring until July or early August in order to collect water.⁸⁹ These 'water meadows' could therefore be harvested in the summer to provide grass and fodder for the livestock that needed be fed during the long and cold winter months, when animals were commonly kept in stables.⁹⁰ An example of one such site is Argıt, which is located at an altitude of 2,350m above sea level and has little land suitable for arable usage nearby. Even if the land around it were cultivated, the high elevation would have made it economically unproductive for intensive arable production.

When one considers the relatively small size of some of these water installations and their proximity to pasture, another interpretation of their function presents itself — namely, that they may have been used for watering large herds in upland areas. These structures may have retained water in the dry summer months so that they could function as watering holes or 'dew ponds' for herds that grazed the uplands at this time of year. The stone foundations of large structures, Belli's so-called 'giant houses' have been identified close to the Arç and Kırmızı Düzlük dams.⁹¹ These are too large to be domestic dwellings and may be better interpreted as stables or open animal pens for seasonal use. Pens or stables such as these may have been used for gathering large numbers of animals together at certain times of the year for the purposes of breeding, shearing, trading, marking or many other reasons. As such, they would also have represented important foci of human activity in these upland areas. In such an interpretation the nearby water facilities can be seen to have been valuable resources for pastoralists or semi-nomadic tribes who maintained large herds in these areas during the summer months, rather than as irrigation reservoirs for intensive arable agriculture.

These new interpretations of the date, origin and precise function of the water facilities identified by Belli and others⁹² across eastern Anatolia do not necessarily contradict the basic hypothesis

⁸⁶ Belli 1999, pp. 11–13.

⁸⁷ Belli 1994b, p. 103.

⁸⁸ Sevin and Belli 1977, pp. 381–394.

⁸⁹ Belli 1994b, p. 103.

⁹⁰ Yakar 2000, pp. 186–196; Çifçi (forthcoming).

⁹¹ Belli 1994b, pp. 88–101, fig. 19, 20, 22.

⁹² Ögün 1970; Burney 1972a, pp. 179–186; Garbrecht 1980, pp. 306–312; 1988 pp. 185–198.

that there was intensification of agriculture in the region during the Urartian period. That is to say, a pattern of land-use in which there was intensification of arable farming on the lowland plains by means of large scale irrigation systems combined with intensification of pastoral production on the uplands by the use of 'water meadows' and 'dew ponds' would be entirely consistent with the premise of increasing agricultural intensification to support the appearance of new large populations centres that many scholars have proposed happened during the Urartian period. However, this new, more nuanced, reading of the available evidence can only be securely proven by better understanding of water facilities in relation to their specific geographic location and more precise dating evidence. Whereas the former might be achieved by using GIS technology to plot individual facilities against their local topography, hydrology and climate, the latter is likely to remain an on-going barrier to their secure interpretation.

Conclusion

The physical geography of eastern Anatolia is such that intensive agriculture will only ever be possible here by means of irrigation and the provision of water management systems. Survey works by Oktay Belli⁹³ identified widespread evidence for such systems from across the region, on the basis of which he concluded that these had made possible a phase of extensive arable intensification by the Urartian state. Belli's work stimulated much debate about the nature of Urartian irrigation, including this current article.

The critical review presented here has summarised the evidence for Urartian irrigation systems and offered arguments against the interpretation of some of them initially offered by Belli. Although there is widespread evidence for such systems, the precise dating of them is difficult and this inevitably limits our ability to draw firm conclusions about the relationship between the archaeological phenomena recorded on the ground and the relatively short-lived floruit of the Urartian Kingdom. Although large irrigation systems can be securely identified and dated by inscriptions erected by the Urartian kings who built them, other forms of water management, such as *qanat* systems, may also have been used, and not all construction was necessarily organised centrally by the Urartian state. Rather, local communities and rulers may have been responsible for the construction of some systems. Nor were all water management facilities solely for the purpose of irrigation to enhance arable production; some may have been used for pastoralism.

As with many aspects of Urartian society and economy, it has previously been assumed that the construction of irrigation systems in eastern Anatolia was centrally organised by the Urartian state. Such an interpretation can be sustained because of the limited nature of the archaeological and epigraphic evidence. However, systematic critical reconsideration of the evidence and the geographical character of the region allows a different understanding to be proposed. In such a reading of the evidence, although it is certainly reasonable to continue to conclude that there was an intensification of agriculture in connection with the growth of large population centres during the Urartian period and that a large number of water management systems of various sizes and types were associated with this, the assumption that this was a centralised state-organised activity now needs to be questioned. It is also possible to argue that not all of the water

⁹³ Belli 1994a, pp. 9–30; 1994b, pp. 77–115; 1997; 1999, pp. 11–26; 2001, pp. 358–364; 2008, pp. 307–312.

management systems that have been identified were used just for the irrigation of arable land. Rather, it could be argued that the new population centres required an intensification of both arable and pastoral production in the region, for both of which water management facilities were required.

Looking forward, it is clear that archaeologists and scholars working on this subject will need to pay much closer attention to the precise use of terminology, consideration of the specifics of geographic location and the application of chronology when considering this subject in future.

King	Texts	Location
Minua	CTU A 5-12 12A-D, CTU A 5-13, CTU A 5-14A-D, CTU A 5-15A-E	Van
	CTU A 5-16	Bekri/Muradiye
	CTU A 5-17 Ro	Erciş
	CTU A 5-18	Van
	CTU A 5-20	Adalak / Malazgirt
	CTU A 5-21	Hotanlı / Malazgirt
	CTU A 5-22 Vo	Malazgirt
	CTU A 5-23 Vo	Akdamar/ Van
	CTU A 5-24 Vo	Karahan / Muradiye
	CTU A 5-25 Vo	Patnos
	CTU A 5-67	Bostankaya / Malazgirt
	CTU A 5-58 A-C	Van Kalesi
	CTU A 5-59 A-D	Ain-e Rum / Ushnaviyeh
Argišti I	CTU A 8-2 Ro, CTU A 8-3 IV	Armavir
	CTU A 8-3 V	Erciş
	CTU A 8-15	Armavir
	CTU A 8-16	Armavir
Sarduri II	CTU A 9-9	Damla Köy-Patnos
	CTU A 9-17	Çavuştepe
Argišti II	CTU A 11-1 Ro; CTU A 11-2 Vo	Erciş
	CTU A 12-8	Eçmiadzin / Erevan
Rusa III	CTU A 14-1 Ro	Van

Table 1. Summary of known inscriptions that make mention of irrigation works by Urartian kings and their locations (after Salvini 2008).

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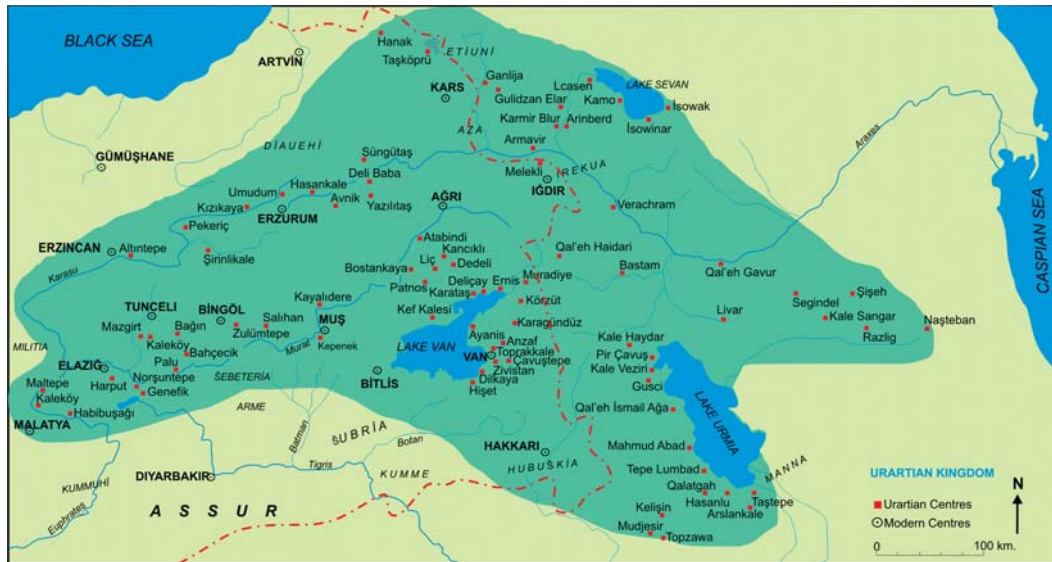


Fig. 1. Approximate extent of the boundaries the Urartian Kingdom and its key settlements in the period 9th and 6th century BC.

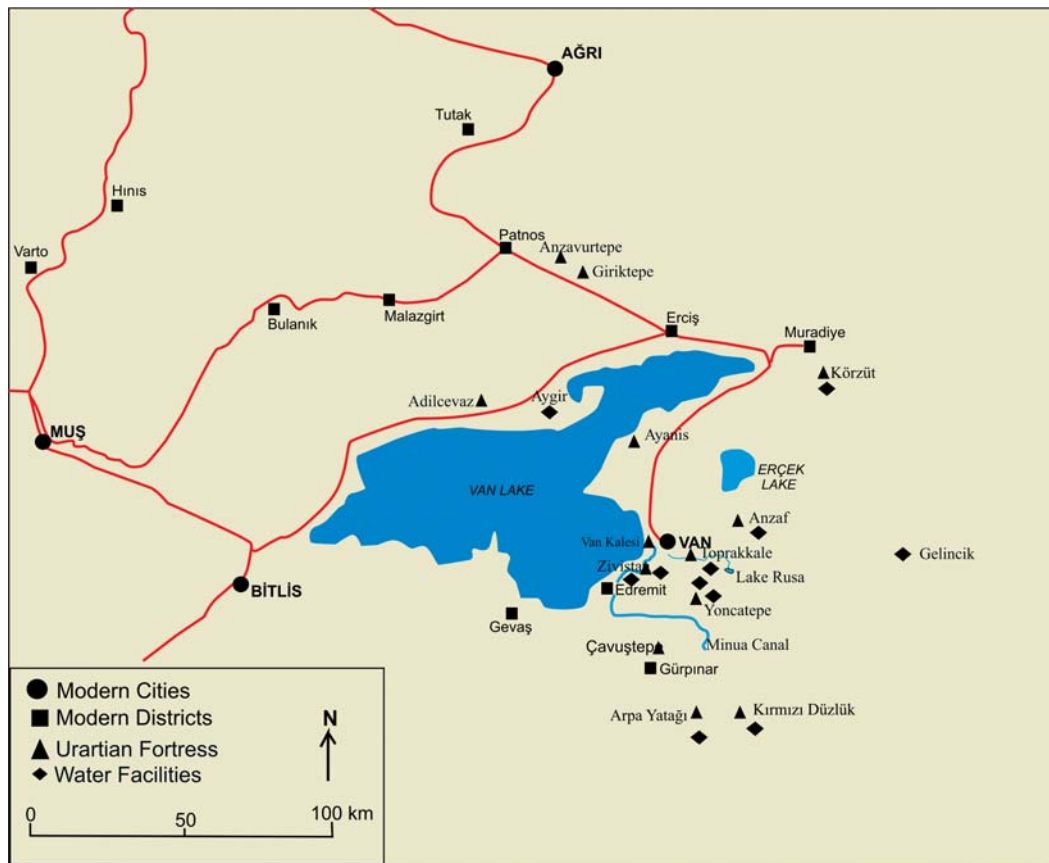


Fig. 2. Water Facilities and key settlements in the Lake Van basin.



Fig. 3. The Minua Cana supporting wall, Kadembastı Mevkii.



Fig. 4. Cuneiform inscription of Minua, Kadembastı Mevkii.



Fig. 5. A view of Minua Canal, Kadembastı Mevkii.



Fig. 6. Modern aqueduct over the Hoşap River.



Fig. 7. The sluice of the Lake Rusa dam, the northwest wall (courtesy of Bülent Genç).

Reinterpreting Iconography with Astronomy

Amanda GOLDFARB

Abstract

*This paper focuses on Canaanite and Phoenician iconographical depictions of astronomical events. It draws on star mapping programmes that provide new insights into the ancient night sky. It is argued that well-known narratives such as the lion/bull attack, common in the Near East, had astronomical significance. The different depictions of seasonal events — especially those decorating metal bowls — indicate that artefacts bore multivalent iconographies often with clear astronomical associations. Phoenicians and Canaanites practised at least a basic level of observational astronomy, although their mathematical determinations remain conjectural.**

Introduction

The sky was a vital feature of the ancient Near Eastern world; it aided in time keeping, navigation, religion and weather prediction, among other aspects of life. Modern scholars often use clues to piece together evidence of the practice of observational astronomy, such as Mesopotamian texts¹ and Egyptian calendars and architectural alignments.² The data is less clear, however, with the Canaanites and the Phoenicians. For evidence of their astronomy, we must draw upon their iconography, religious works and calendars. This article will focus on Canaanite and Phoenician iconographical depictions of astronomical events made possible through the use of star mapping programmes, such as *Stellarium* and *TheSky*, and detailed background research that provide new insights into the ancient night sky. Four metal bowls are particularly indicative of astronomical events — the Spring Equinox represented on the Regolini-Galassi and Ras Shamra Bowls, the Autumn Equinox depicted on the Bernadini Bowl 2 and the Summer Solstice on the Curium Bowl. These form the basis of this discussion, but the astronomical references embodied in the iconography on the bowls carry wider implications for interpreting other decorated artefacts throughout the Near East.

While there are numerous works that deal with Mesopotamia's astronomical history³ and various arguments over Egypt's nebulous astronomical field,⁴ little has been written on Phoenician or

* I would like to thank Claudia Sagona, Louise Hitchcock, and Antonio Sagona for their comments and guidance during the course of this research.

¹ Evans 1998, p. 5; see also Rochberg 2004, p. 7; Steele 2008, p. 41; For example, astronomical texts such as the MUL.APIN (which date to around 1,000 BCE) were records of the movements of stars and planets, while the EN.NUN texts were notations taken from regular night observations, with the earliest dating to 652–651 BCE.

² McDermott 2001, pp. 141, 148; For example, the pyramids are aligned on celestial north; a placement which can be achieved through monitoring the rising and setting of a northern star. The Egyptians also had two calendars, one solar and one lunar.

³ See Neugebauer 1975, vols 1 and 2.

⁴ For example, Neugebauer 1975, vols 1 and 2; see also Selin 2000, pp. xix–xxiii; Krauss 2006, pp. 386–391.

Canaanite astronomy.⁵ Yet ancient scholars, such as Aratus and Strabo, referred to the Phoenicians as having had a great astronomical knowledge. From Strabo (XVI.24):

The Sidonians [Phoenicians], according to tradition, are skilled in many beautiful arts...and besides this they are philosophers in the sciences of astronomy and arithmetic, having begun their studies with practical calculations and night-sailings...This science, then, is believed to have come to the Greeks...astronomy and arithmetic from the Phoenicians.

In antiquity, the Ursa Minor constellation was called *Phoiniké*, the ‘Phoenician Star’, and this is believed to have been used in the deep sea navigation undertaken by the Phoenicians.⁶ Also, the third century Roman poet, Aratus (44), in reference to sailors of one Phoenician city, wrote that the “Sidonians make the straightest course”.⁷

It is possible to determine some of the Phoenician and Canaanite astronomical knowledge by recognising how they related to the heavens through their religious practice, expressed through omen reading and iconography.⁸ In the Near East generally, the sun and moon — in fact, the very heavens — were important religious entities, often identified as individual deities and, as such, were integral components of the various religions.

The historical record strongly indicates that naming patterns in the sky was not a matter of discovery, but rather the result...of a deliberate framing of figures that possessed religious or mythic significance, perhaps an attempt to commemorate the glory of the gods who created the world.⁹

Re-Interpreting the Iconography

Iconographical evidence of astronomical observations can be found on a range of artefacts, such as stelae, seals, coins, bowls, pendants and so on.¹⁰ These objects were often made from luxury commodities, such as silver and ivory, and were frequently ornamental pieces and may have also been imbued with sacred knowledge. It is not the purpose of this article to provide a single and exclusive interpretation for the iconography under review. Rather, new insights for well-known motifs will use astronomical data will be provided, drawn from a star chart compiled by Brown¹¹ and updated by the author, plus star mapping programmes that now offer a retrospective panorama of the ancient night sky. Hence, the previous interpretations will not be discussed in any great detail. It should be noted that at this stage, we may not be able to explain why specific astral depictions were chosen over others (or even over other forms of narrative), nonetheless the events must have been significant to the artefacts’ owners or creators.

⁵ This lack of modern scholarship is in part due to the dearth of texts describing Canaanite and Phoenician astronomy (especially when compared to the abundant cuneiform texts that concern Mesopotamian astronomy).

⁶ Bartoloni 1988, p. 72; 1995, p. 283; see also Moscati 1988, p. 72; Aubet 1993, p. 142.

⁷ Aveni 2008, p. 53.

⁸ Krupp 1984, pp. 2–3; 2000, p. 26; see also Aveni 2008, p. 32.

⁹ Aveni 2008, pp. 32–33; Our modern constellations are thought to be the descendents of third millennium Sumerian star patterns, although they only appear in recorded history in the seventh century BCE.

¹⁰ The equinoxes and solstices were extremely significant times of the year and helped identify the seasons. As a result, only those artefacts highlighting seasonal themes shall be addressed here.

¹¹ Brown 1899–1900, vol. 1, p. 119.

The elaborately decorated metal bowls were crafted by Phoenician or Canaanite artisans during a period of international communication, spanning from approximately 1,400 to 650 BCE; where commercial goods that were exchanged from northern Africa, the Levant and throughout the Mediterranean along with the artistic styles the bowls carried.¹² Many of these motifs persist throughout the iconography of the ancient Near East and have traditional associations with war, kingship and divine power.

The Canaanites and Phoenicians both adopted motifs from the surrounding cultures,¹³ especially from the Egyptians and Mesopotamians. From Predynastic times onwards, Mesopotamian artistic influence was apparent in Egyptian art. Icons such as the ‘priest-king’, ‘master of animals’, the twisting snake, and the griffin were used on stelae and cosmetic items.¹⁴ Other common Mesopotamian images, such as the ‘tree of life’ and the sphinx (also found in Egypt), were used on Levantine artefacts. Another motif, of lions attacking a bull, was also common. The latter representation was in use from the fourth millennium throughout the Near East,¹⁵ and as we shall see, it was a significant celestial symbol (Table 1). These symbolic notions have been discussed at length elsewhere,¹⁶ but the principle and oft repeated association between iconography and celestial features are summarised in Table 1.

TABLE 1.
List of icons and astral meanings, designed to highlight the possible celestial significance of the images discussed.

ICON	ASTRONOMICAL FEATURE
Ba'al	God of Storms ¹⁷
Birds	The Bird Constellation
Bull Death	Spring Equinox
Charioteer	The Chariot Constellation
Cow/Bull	The Bull Constellation/moon
Griffins	The Sun?
Horses	The Horse Constellation
Isis	Sothis
Jackal/Dog	The Dog Star
Kings	Melqart/Perseus or Melqart/Herakles Constellations
Lion	The Lion Constellation
Lion Death	The Summer Solstice
Lion Victory	The Autumn Equinox
Lotus Plants	Rebirth of Constellations
Soldiers	Stars

¹² Markoe 1990, pp. 13–16; see also Cornelius 1994, p. 1; Pittman 1996, pp. 11–14; Feldman 2002, pp. 6–29.

¹³ Markoe 1990, p. 17.

¹⁴ Davis 1992, pp. 23–24; see also Pittman 1996, p. 14.

¹⁵ Hartner 1965, p. 1.

¹⁶ Goldfarb 2012.

¹⁷ Weather was considered as an astronomical feature in the ancient Near East.

ICON	ASTRONOMICAL FEATURE
The Goat/Ram	The Goat Constellation/Goat Star
The Horus-falcon/Horus	The Sun
The Hunter/Archer	Orion or Reseph or Mars or the Arrow
Twin Prisoners	The Twins
Winged-Lions/Sphinxes	Solardisks

The Canaanite and Phoenician use of these designs was not without meaning; they were not empty reproductions of another's art and merely decorative. As Feldman states:

What has been called 'internationalism' in these pieces can be seen as foreign quotations that were directed internally (that is, locally) and were intentionally chosen for their symbolic potential; thus, their cultural origin served an important function in contributing to the reading of the imagery within its new context.¹⁸

These icons were therefore not solely "an inventory of the natural world, but a selection taken from it".¹⁹ The designs were multivalent and were used to evoke the imagination in certain, culturally specific ways. Thus while these icons were initially borrowed by the Canaanites and Phoenicians, they may have conveyed a message and ideology that was different from their original contexts.

The Canaanites and Phoenicians used hundreds of icons in the Late Bronze Age and Early Iron Age in their art. Only icons, symbols and motifs that represent possible astronomical features shall be analysed here, notwithstanding that they may have already well-known associated themes and concepts in modern literature. Objects can be represented by icons, which are analogous or similar in appearance to them, while symbols may only arbitrarily represent an object or idea.²⁰ In the study of iconography, the 'meaning' of an image is dependent upon a melange of factors: context, the intention, expectations and cultural, or social, knowledge.²¹ It is essential to review *all* the aspects of iconographical representations and symbols on each artefact, both as individual components and as aspects of a greater whole — an approach not often taken in the literature. In this way an artefact's multivalency becomes more apparent. A selection of Canaanite and Phoenician artefacts with seasonal links shall be reviewed here.

Phoenician artefacts have often been found in cemeteries or funerary deposits as well as in sanctuaries and towns.²² 'Eclectic' and 'hybridised'²³ are words that have been used to describe Phoenician artistic style, as it borrowed motifs and designs from cultures such as the Egyptians, Syrians and peoples of the Aegean.²⁴ These hybridised images formed an international style, which contributed to the production of supra-elite identities.²⁵

¹⁸ Feldman 2002, p. 24.

¹⁹ Morgan 1985, p. 10.

²⁰ McGowan 2010, pp. 101–102.

²¹ McGowan 2010, p. 121.

²² Brown 1992, p. 7.

²³ Feldman 2002, pp. 24–25; 2006, pp. 1–14; see also Hitchcock 2011, pp. 267–280, for a discussion on hybridity and possible new, more appropriate terminology.

²⁴ Markoe 1990, pp. 14–16; see also Brown 1992, p. 8.

²⁵ Feldman 2006.



Fig. 1. The Regolini-Galassi Bowl (after Hopkins 1965, Plate XVIII B).

The Spring Equinox

Regolini-Galassi Bowl

The Regolini-Galassi Bowl is dated to the mid-seventh century BCE and was discovered in the tomb of the same name in Caere, Italy (Fig. 1). The bowl is thought to have originated from Phoenicia or Cyprus.²⁶ Two burials were found in the tomb; one of an elite (possibly royal)

²⁶ Strong 1979, p. 66.

woman and a cremation (of a male). There was a possible third burial on a bronze bed.²⁷ Hopkins suggested that the overall iconography of the vessel represented the sun's seasonal journey, including the solstices.²⁸ Hopkins' interpretation can be further developed by reviewing the bowl's iconography in its entirety, with special attention to the animal conflict in the central register. From this, it is apparent that the bowl may have depicted the time of the spring equinox.

In the central register, a falcon flies over two lions attacking a bull, framed by four lotus plants in the background. In Near Eastern art, it is not unusual to see portrayals of animals, many of which could be found in the night sky as constellations or planets (see Table 1 for examples). It is also common to see some of these animals in scenes of conflict, such as the bull and the lion (Fig. 1). Both of these animals were present in the night sky as the well-known constellations of the Bull and the Lion (see Fig. 2). Throughout the year, these star groups experienced heliacal risings ('births') and settings ('deaths'); with the heliacal rising occurring when a star, constellation, moon or planet became visible at dawn, where it was previously hidden from sight. The heliacal setting takes place when a constellation, star, moon or planet sets at sunset, and is no longer visible in the evening sky for a period of time. Their journeys provided a rich field upon which ancient cosmologies were sown.

The lion-attack has been described as depicting heroic victory,²⁹ but of more significance here, also as a solar event in Mesopotamian art³⁰ or as a design used to represent the autumn equinox.³¹

While an equinox interpretation for this symbol appears to be correct (as we will soon see), it was more likely used to represent the spring equinox. This is indicated by the fact that the Bull constellation began its heliacal setting from the middle of March (and continued through to early June) — about the time of the spring equinox during the middle of the seventh century BCE (Fig. 3, bottom right). In the evenings during the Bull's setting, the Lion rode high in the sky. It is possible that the motif of the lion's supremacy over the bull was indicative of the Lion constellation's position when compared to the Bull's (Fig. 3, top left). It is possible that the Horus-falcon in this register represented the sun and its role in the rising ('birth') and setting ('death') of constellations. As symbols of death, the sun and re-birth, the presence of lotus blossoms appears to accentuate the renewal hypothesis.³²

Turning to the other iconography on this bowl, it becomes apparent that the animals and remaining icons can be associated with the spring equinox, further solidifying the proposition that the bull/lion battle indicated a solar event. The outer register of the Regolini-Galassi Bowl is comprised mainly of marching soldiers each holding a shield and two spears, with the scene delineated by possible cypress trees. It is conceivable that the soldiers represented the stars not linked with constellations (of which there were many). Four mounted fighters are also depicted, three of which are overflown by birds (the Bird and the Horse were also well-known constellations, Table 1) and one by a Horus-falcon. The Bird and the Horse were relatively closely associated in the evening sky (see Fig. 2, lower right quadrant), appearing prior to dawn at the time of the

²⁷ Vatican Museum 2010: http://mv.vatican.va/3_EN/pages/x-Schede/MGEs/MGEs_Salao2_01_070.html.

²⁸ Hopkins 1965, pp. 31–32.

²⁹ Markoe 1989, p. 91.

³⁰ Hartner 1965, p. 3.

³¹ Hopkins 1965, pp. 31–33.

³² Markoe 1990, p. 19; see also Vance 1994, p. 7; Azize 2005, p. 143.

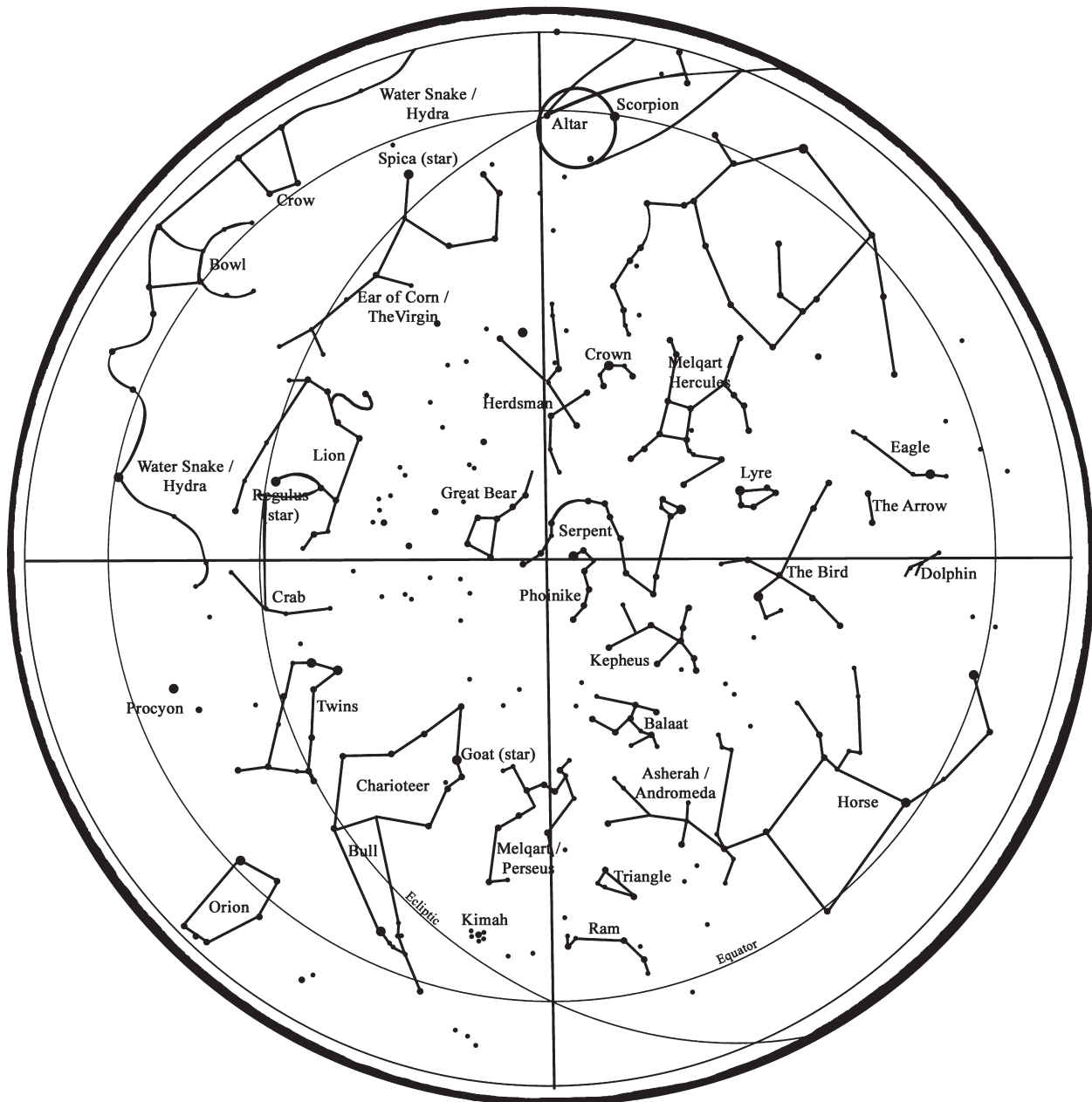


Fig. 2. Constellation map based on Brown's version, to show the sky as it would have been seen from Tyre, 1,200 BCE (after Brown 1899-1900, vol. 1, p. 119).

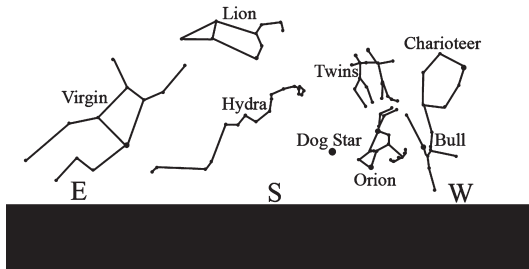


Fig. 3. Schematic representation of the night sky during April in the mid-seventh century BCE (modern constellations used to show ancient constellation position) (Author illustration).

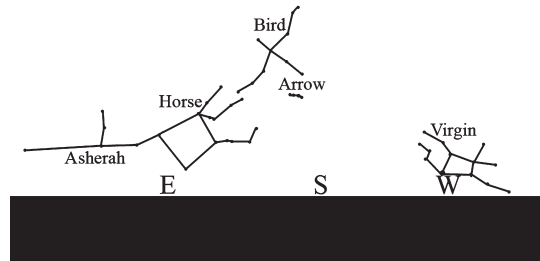


Fig. 4. Schematic representation of the pre-dawn sky during April in the mid-seventh century BCE (modern constellations used to show ancient constellation position) (Author illustration).

equinox. One of the more striking features of the outer register is the presence of the charioteer, which was also known as a constellation, the Chariot/Charioteer (see Fig. 2, lower left quadrant and Fig. 1), which set soon after the Bull.

In the middle register (Fig. 1), a lion attacks a man lying between its legs, overflowed by a Horus-falcon. The lion is, in turn, speared by a soldier as well as hit with two arrows shot by an archer on foot and another who is mounted. Between the mounted archer's legs runs a dog. According to Hopkins, the main enemy in the middle register is the lion.³³ He argued that the prone man is indicative of the autumnal equinox:

In the later Greek zodiac, the Scorpion follows the Scales of the equinox and constrains and compresses with its claws the sun in the last months of autumn to cause the daylight to become shorter and shorter.³⁴

We shall continue to see, however, that the total iconography of this register appears more representative of the spring equinox.

Of the animals depicted in this scene, all can be found in the sky over the course of the day and night, around the spring equinox: the Lion and the Horse representing constellations, the Horus-falcon embodying the sun, and the Dog in all likelihood represented the Dog Star. The Arrow, too, was a constellation (Fig. 2). The fallen man may have been associated with any of the male constellations, such as Orion, Perseus/Melqart or Herakles/Melqart; yet, if we look closely at the animals, we see a pattern that may provide a clue as to the man's astronomical identity. Of the four animals shown in this scene, only the Lion rode high for most of the night during the time of the spring equinox. Soon after sunset, the Dog Star descended towards the horizon and just before the sunrise, the Horse made its first appearance in the sky. The Horus-falcon probably indicated the pivotal factor for this juxtaposition, the movement of the sun. If we follow this pattern — that the animals appeared just before/just after the sun rose/set — it leaves Orion or Perseus/Melqart (which set soon after the Bull) as the candidates for the man's astral representation (Figs 3 and 4). Due to the prevalence of hunters on the bowl, however, and the iconography depicting the fallen man, it appears that Orion may be the most likely choice.

³³ Hopkins 1965, pp. 31–33.

³⁴ Hopkins 1965, p. 33.

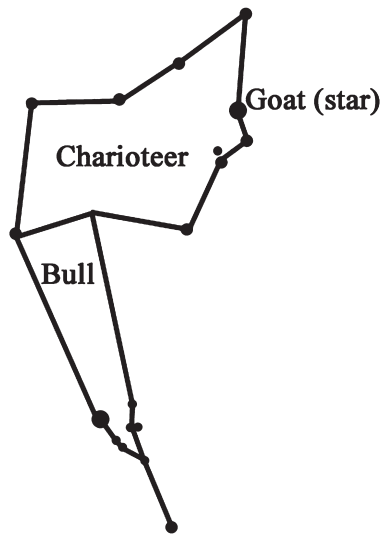


Fig. 5. The ancient Charioteer constellation with Goat (star)
(Author illustration).

Continuing around the middle register in an anti-clockwise direction another Horus-falcon appears, followed by a goat climbing down a rock face, overflowed by a bird. Once again, there is a concurrence of the evening/morning astral event, with the Bird appearing before dawn, and the Goat Star setting soon after sunset.

In Hopkins' review of this bowl, the goat's/ram's presence is unexplained.³⁵ It is important to comment on this animal's inclusion for two reasons: first it was a star (the Goat) and a constellation (the Ram), and second, the Goat star was part of the Charioteer constellation (Fig. 5). It may not be a coincidence that the goat on this bowl was drawn directly beneath the chariot in the outer register.

Moving counter-clockwise, we see two fruiting palms bracketing a battle between a rampant lion and a man. Neither man nor lion appears to be victorious over the other. This may represent the fact that Herakles/Melqart constellation also spent at least half the night high in the sky, along with the Lion.

Again, following counter-clockwise, two horses (with riders) shown in two consecutive scenes, one with a lotus blossom appearing over their flank, the other, with a bird flying above;³⁶ they walk towards the original fallen man and lion scene. The lotus blossom could have represented the Horse's rebirth into the night sky (due to its appearance soon before sunrise), much the same as it represented the Bull's death (central scene) and eventual rebirth.

From the above analysis, it is apparent the majority of this bowl's iconography had astral connotations which, when contextualised, were associated with the spring equinox.

³⁵ Hopkins 1965, p. 32.

³⁶ There was also a constellation called, the Bird. It is modern Cygnus.



Fig. 6. Gold bowl from Ras Shamra acropolis (after Feldman 2002: 19).

Gold Bowl from Ras Shamra

A Canaanite example of the bull/lion battle is found on a gold bowl unearthed in the acropolis at Ras Shamra that dates between the fifteenth and thirteenth centuries BCE (Fig. 6).³⁷ The bowl consists of three narrative registers that can be broken down into segments, and the overall iconography of the bowl appears to indicate the solar divinity's journey throughout the sky via the plethora of motifs, notably the lion, solar orbs and griffins.

The outer register is bordered on both sides by running spirals (often used to depict water and is a common Aegean motif³⁸) and the bowl brims with complex imagery that is indicative of the aggressive and dominant nature of the lion. Beginning at the left side of the register, we see two

³⁷ Feldman 2002, p. 8; The bowl is 17.78 cm in diameter.

³⁸ Goodison 1989, p. 36; see also Getz-Gentle 1996, p. 180; Preziosi and Hitchcock 1999, p. 54; Cyprian Broodbank 2000, p. 249.

soldiers attacking a rearing lion poised above a collapsed stag. Lotus blossoms pepper the scene. This is followed by the now familiar scene of a lion attacking a bull, watched over by a Horus-falcon. A lotus blossom appears to have sprouted from the bull's back and a solar disk or 'encircled star'³⁹ is floating beneath the outstretched rear legs of lion and bull. These two scenes, of man attacking lion and lion attacking bull, seem to once again indicate an association with the spring equinox, through the death of the bull and aggressiveness of the lion.

Next, we see a rearing lion poised over the back of a winged griffin, which is seated before another floating solar disk (also a solar icon, see below and Table 1). The scene is punctuated by lotus flowers. In the central section of this register, a sphinx and winged lion, complete with bull horns, stand to either side of a palmette. Vegetation is abundant. There are at least two sun disks, one underneath each mythical beast. As the winged creatures are part lion, was it possible that they could represent the winged solar disk, as the sun could be represented by a lion? Sphinxes were used in Assyria as doorway guardians and Zinner has argued that they may have represented the sun god.⁴⁰ Following this are two goats, crossed at the hindquarters, facing opposing directions with sun disks hovering over their backs. The importance of the goats here shall be addressed when we discuss the central register where they feature again. The last two scenes in the outer register depict lions attacking bulls with birds overhead. Vegetation, lotus blossoms and solar disks are throughout the scenes.⁴¹

When reviewed closely, it becomes apparent that the solar disks are not associated with the lions — the only time a disk appears with a feline in this register occurs when one is attacking a bull. The lions also have star bursts on their shoulder: perhaps this represents the Regulus Star within the Lion constellation. Out of the scenes reviewed here, three of them display lion/bull attacks, one a human/lion attack, one a rampant lion poised over the back of a griffin, two goats, and two mythical beasts (which consist of lion body-parts). The lotus blossom, a sign of rebirth, is depicted throughout each scene. From this, we can see strong solar elements throughout and a common theme that depicts the supremacy of the lion, with human attempts to control its aggression.

The middle register is strung with pomegranates, well-known symbols of fertility and may indicate, on their own, the time of fertility. Two bulls face-off, separated by a palmette; one bull is associated with a floating solar disk. In the lower half of the middle register, two lions watch the bulls, separated from each other and their prey by palmettes and they appear to have stars on their shoulders.

As there is only one solar disk in this register, compared to the many that dot the previous register, it may be possible that the disk/bull combination indicates the bull at the time of its 'death', and possibly its journey through the daytime sky, which placed it 'out of reach' of the lion. This assumption, that the people of Ugarit (or at least some priests) may have realised that the constellations were visible during the daytime sky, is a rather large one. Nonetheless it would have been possible for someone at Ugarit to determine that the constellations did travel in the

³⁹ Feldman 2002, p. 19.

⁴⁰ Zinner 1957, p. 24; see also Collon 1995, p. 137; According to Zinner 1957, p. 24, the sphinx was used to also represent the lion, and was a symbol of rebirth and the sun god.

⁴¹ Feldman 2002, p. 18, described the birds as scavengers although this does not appear to be supported by the surrounding iconography.

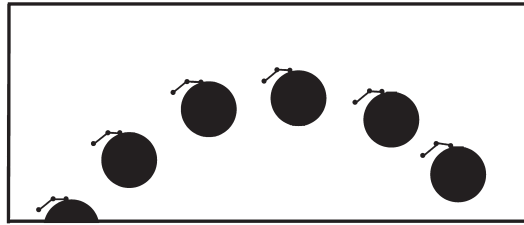


Fig. 7. Schematic representation of the sun and Ram constellation in the daytime March sky, in the fifteenth to thirteenth centuries BCE over Ugarit (not to scale; modern constellation used to depict the position of the ancient) (Author illustration).

daytime sky because at the time of an eclipse, the background stars can become visible (depending upon the magnitude of the eclipse).

From reviewing NASA's records, it is apparent that from the years 1,500 BCE to 1,200 BCE, there were at least 100 eclipses over Ugarit, ranging from 0.004 magnitude to 1.0,⁴² with at least 10 eclipses greater than 0.9 in magnitude (which would have rendered the background stars visible).⁴³ If the positions of the stars during a daytime eclipse were recorded in some fashion, it may have been possible that some of the people of Ugarit were aware that the stars moved through the daytime sky.

The above assumption may well be valid, as the central register on this bowl has five goats/rams, separated into two groups of two and a single goat. The background of the inner rosette is filled with an amalgamation of solar orbs and papyrus plants. Each goat is associated with at least one sun disk. The goat in the upper half of the register has two smaller astral disks behind it. This is perhaps the most fascinating register of all, as during the spring equinox, the Goat/Ram constellation was not visible in the night sky. Instead, using star mapping software, it is possible to see that the Ram constellation followed the path of the sun very closely (Fig. 7); did all those eclipses mean that someone was aware of the constellation's daytime movements? The Goat Star, also travelled nearby as part of the Chariot constellation, adjoining the Bull (Fig. 5). The star would thus have only been visible for a short while after sunset, as it would have heliacally set when the Bull did. It becomes apparent that the positioning of the astral disks may indicate the constellations' position in the sunlit sky. This is a profound understanding that required a high level of extrapolation and mathematical knowledge.

The Autumn Equinox

Bernardini Bowl 2

For both the autumnal and spring equinoxes, we find a familiar feature prowling the skies, the Lion constellation. The constellation's seasonal importance can be shown through iconography found on another Phoenician artefact, the Bernardini Bowl 2 that also dates to the

⁴² NASA 2011: <http://eclipse.gsfc.nasa.gov/JSEX/JSEX-AS.html>.

⁴³ Können and Hinz 2008, p. H22.



Fig. 8. The Bernardini Bowl 2 (after Hopkins 1965: Plate XIXB).

mid-seventh century BCE. It was discovered in the Bernardini tomb, Palestrina, Italy, and is argued by Hopkins to represent the change of seasons,⁴⁴ indicated by the choice of animals depicted and the harvesting of fruits (Fig. 8).⁴⁵ The individual interred in the tomb was elite, as indicated by the numerous grave goods found. As none of the bones were preserved, it leaves much about deceased's social identity in question.⁴⁶

⁴⁴ Hopkins 1965, p. 34.

⁴⁵ Curtis 1919, p. 9; see also Hopkins 1965, p. 28; It is 19 cm in diameter.

⁴⁶ Curtis 1919, pp. 10, 13, 14, 16; The skeletal remains were probably discarded during excavation. Among the burial goods were shields, bowls, daggers, lance heads, a tripod, a gold plaque, a large cauldron, cups and many other items.

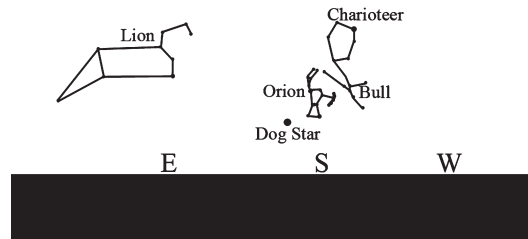


Fig. 9. Schematic representation of the night sky during September in the mid-seventh century BCE (modern constellations used to show ancient constellation position) (Author illustration).

While the bowl's iconography does appear to represent the harvest season, it is indicated by more than just the picking of grapes depicted on the bowl, as the majority of figures represented were also found in the night sky around the time of the autumnal equinox.

In the outer register, two horses graze under a palm tree. Moving clockwise, we see two figures, one possibly harvesting food, one picking grapes. The horses are separated from the harvest scene by fruiting palms. At night, during September, the Horse constellation rode high in the sky. The combination of this constellation with the harvesting of grapes indicates the possible time of year.

This scene is separated from the next by another palm. A mounted archer then shoots at one of a pair of lions that are attacking a bull underneath two falcons/Horus-falcons (Fig. 8). The archer may represent the proximity of the Arrow constellation to the Horse star group (Fig. 2). The archer, looking back over his shoulder at the lion, might indicate the Horse's position in the night sky, as the Lion constellation would have been 'behind' it. The combination of sun symbols and lion-attack bring to mind the death of the Bull constellation, which occurred at the spring equinox. Here, however, it possibly shows the vigour of the Lion, which, in September, had just returned to the sky after its 'death' (*i.e.* it had heliacally risen).

Moving on in this register, a lion attacks a man with a jackal/dog at his feet. A lotus plant separates this from the following scene, where a cow, bull and a calf are walking underneath a series of birds. A hunter then carries his prey, another bird flying overhead. Once again, we see the aggressiveness of the newly returned lion as he assumes a rampant position towards a hunter who is aided by a dog/jackal (the Dog Star was also visible in September). Interestingly, the Dog Star was located in the night sky below Orion (the Hunter), and between Orion and the Lion. The calf, cow and bull indicate the continued presence of the Bull, despite the earlier lion attack. The Bird constellation was also visible, as was the Arrow (Fig. 9).

In the central register, underneath a Horus-falcon and to the left of a lotus plant, a lion stands tall, subduing a captive (Fig. 8). Due to the reappearance of the lion-attacking-man scene, Hopkins asserted that both this and the Regolini-Galassi Bowl on which it also occurs represented the autumnal equinox.⁴⁷ We can now suggest that the Regolini-Galassi Bowl was, in fact, a representation of the spring equinox. On Bernardini Bowl 2, however, the lion's victory and its attacks on the cattle, man/dog, and prisoner, were probably chosen to represent the Lion's triumphant return to the night sky during September. This, in combination with the harvest scenes, indicates this bowl was — like Hopkins suggested — a representation of the autumnal equinox.

⁴⁷ Hopkins 1965, p. 34.



Fig. 10. The Curium Bowl (after Hopkins 1965, Plate XIXA).

The Summer Solstice

The Curium Bowl

The silver Curium Bowl dates to the early seventh century BCE (Fig. 10) and is thought to have been found at Kourion, Cyprus. The bowl had a partly destroyed inscription over the central figure that read, "I am [the bowl] of Akestor, king of Paphos". This was replaced by another inscription, "I am [the bowl] of Timokretes".⁴⁸ The overall iconography of this bowl has been suggested to represent the autumn equinox.⁴⁹ While an astronomical meaning can be attributed to this artefact, its focus was likely to have been the summer solstice.

⁴⁸ The Metropolitan Museum of Art 2010: <http://www.metmuseum.org/toah/works-of-art/74.51.4554>.

⁴⁹ Hopkins 1965, p. 33.

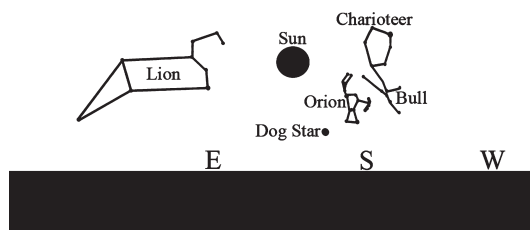


Fig. 11. Schematic representation of the daytime sky during June in the early seventh century BCE (modern constellations used to show ancient constellation position) (Author illustration).

The iconography on this bowl is more orientalised (with strong Assyrian and Egyptian elements), than the Bernardini and Regolini-Galassi Bowls. The outer register is mostly populated by mythical beings such as griffins and sphinxes, and gods and goddesses such as Isis and Horus. Familiar icons, such as cattle, lions and stylised lotus flowers/sacred trees also appear. It is roughly separated into four sections, (Fig. 10:A–D) delineated by two-tiered lotus plants (Fig. 10:I–IV), and one scene possibly incorporating a single-tiered lotus (Fig. 10:C).

If we accept that the outer register has four sections (using the double-tiered lotus trees as separators), then we find different narratives: in one group there is a mix of night and day astral features; and in the other three groups, the narrative appears to be linked with the heliacal rising and setting of stars/constellations.

Beginning from the ‘top’ of **Figure 10:A**, the narrative focuses on the dominance of night-sky symbols. Here, we see a man fighting a griffin, followed by a hunter with cartouche hovering over his head. The griffin was a mythological creature that was a composite of two solar elements, the lion and the falcon. By the Greco-Roman period, it was a symbol of divine retribution.⁵⁰ In this instance, the griffin, due to its composition of sun elements may be seen as another version of the winged disk. This scene shows a battle where neither man, nor griffin, is the victor. It is possible that the hunter here could have represented the hunter in the sky, Orion (who was ‘dead’ during the solstice; Fig. 11).

Moving onwards, in a clockwise direction, we see a king-like figure, perhaps Ba‘al or Reseph, with arm raised in a typical smiting pose.⁵¹ There are kneeling figures (with a cartouche) between Ba‘al and Horus, also with a cartouche. Behind Horus is a man attacking a winged creature (a griffin?). Ba‘al and Reseph were astral deities as was the sun god, Horus. It is difficult to distinguish the kneeling figure/s, but they are represented as captives. As there are three arms, it may indicate two people in reference to the constellation of the Twins (which were not visible during the night sky at this time). The warrior is likely to be associated with Melqart and at the time of the summer solstice, the Melqart/Perseus constellation (with which Ba‘al can also be associated) was apparent in the sky; this could then be interpreted as an example of his growing might after his heliacal rising.

⁵⁰ Pinch 2002, p. 120.

⁵¹ Cf. Vella 2010, pp. 28–30.

In the following scenes (**Fig. 10: B**), Isis is followed by two sphinxes, each facing a stylised single-tiered lotus (**Fig. 10: C**). Isis, clearly a central figure in this register, is surrounded by two double-tiered lotus plants and astronomically, she was associated with Sothis, the Dog Star. During the time of the solstice, the Dog Star was not visible in the evening sky. Her presence, surrounded by lotus plants, is likely to represent the anticipated rebirth of the star. The sphinx was associated with the sun and was often incorporated into the iconography of royal thrones as a guardian figure — it also embodied the power of the Egyptian ruler and protected tombs and temples.⁵² The double sphinx served as a guardian of the Underworld and protected the two horizons in Egyptian iconography.⁵³ In this regard, as there are two sphinxes in the image (**Fig. 10: C**), they represented the recent death (descent into one horizon) and rebirth (ascent of another horizon) of the king.

After the sphinxes, two rams stand to either side of a double-tiered lotus plant (**Fig. 10: IV**), followed by two lions, both rampant, attacking each other (**Fig. 10: D**). At the time of the solstice, the Ram constellation had (a little more than a month prior) returned to the sky after its 'death'. The lions, entwined in battle, may represent repetition of the central register, only with both figures depicted as lions. Finally, we see two griffins poised either side of a double-tiered lotus tree (**Fig. 10: I**).

This complex register appears to be primarily concerned with divinities and celestial struggle. The lions and rams, with their astronomical birth and death, complement the gods depicted, as their constellations/stars also rose and set.

In Hopkins' analysis of this bowl, the inner two registers were accorded more importance than the narrative in the outer register.⁵⁴ The middle register is populated by a range of icons. Starting once again from the 'top', we see the familiar pose of the lion subduing a captive. To the left is a grazing horse and to the right, a crowned sphinx. The lion trampling his human foe was, according to Hopkins, a sign of the autumn equinox.⁵⁵ Yet, if we look closely at the imagery, we find differences when compared to Bernardini Bowl 2 (**Fig. 8**). On Bernardini Bowl 2, the lion stands over a prone figure, but if we look at **Figure 10**, the man underneath the lion is lying on his back, struggling. This difference suggests the fact that Bernardini Bowl 2 depicted a different solar event than that of the Curium bowl.

Returning to the middle register, the horse and the sphinx could have represented the dichotomy of day and night. On the left, the horse may have evoked thoughts of the Horse constellation, flying high in the sky during the evenings, around the time of the solstice, and the sphinx could have represented the sun and the longer days, which occur in summer.

Moving clockwise along the middle register, we find two bulls locking horns separated from another two bovines. Hopkins has argued that due to the fighting bulls — and the presence of the calf in the next scene — that this register depicted the passage of the seasons.⁵⁶ While plausible, the emphasis on the cows may indicate the rebirth of the Bull into the night sky after its heliacal setting, the rising of which occurred near the summer solstice. The cow suckling a calf follows the

⁵² Hestrin 1987, p. 71.

⁵³ Pinch 2002, p. 206.

⁵⁴ Hopkins 1965, pp. 33–34.

⁵⁵ Hopkins 1965, p. 33.

⁵⁶ Hopkins 1965, p. 33.

bull depictions and precedes two hunters attacking a lion hiding in the grass. The suckling calf, a sign of life,⁵⁷ appears to support the theory that this bowl represents the summer solstice and the rebirth of the Bull into the sky. The two hunters attacking the lion also corroborate this, as the Lion was soon to suffer a sky-death.

Hopkins, in his attempt to explain the differences between this bowl and those from Regolini-Galassi and Bernardini, stated:

In the comparison with the other bowl [Regolini-Galassi], conspicuous by its absence is the scene of lions attacking the bull. One expects that the sequence should be the birth, the mature animal, and the death, particularly, since the death figures so prominently in the other sequence. Perhaps the artist made a mistake...⁵⁸

Yet we now know that at the time of the spring equinox, the Bull constellation underwent its heliacal setting. A death scene makes sense within that context. Here, for the solstice, a dying bull would be incongruous. It is thus doubtful the artist made such a mistake.

In the central register, two falcons/Horus birds flank a winged figure (or 'Hero'), who is in the act of slaying a rampant lion. Hopkins argued that the lion was the main enemy, vanquished by a divine agent (Fig. 10).⁵⁹ The winged figure may represent a divine hero, such as Herakles/Melqart — due to the Assyrian-style iconography (he has the four wings of the Assyrian gods)⁶⁰ — whose constellation rode high in the sky during the Lion's heliacal setting around the summer solstice.

Conclusions

Through thorough iconographical analysis of these bowls, it is possible to determine the presence of observational astronomy within the Canaanite and Phoenician cultures, and to perhaps add greater meaning to narrative scenes. The cosmological narratives implied by the repeated iconography indicate that the Canaanites and Phoenicians had defined constellations (evidenced as well by the *Phoiniké* star group) and significant stars that were associated with their various pantheons. It is also apparent that they may have anticipated certain times of the year — such as the solstices and equinoxes — and tracked them through astronomical observations: renewal, death and rebirth of the seasons were mirrored through the passage of the sun and the stars in the sky. Furthermore, while the Canaanites may have been aware that the constellations moved throughout the daytime sky, it is by no means proven. Nonetheless it is an interesting and important suggestion that may be validated through future research.

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⁵⁷ Hopkins 1965, p. 32.

⁵⁸ Hopkins 1965, pp. 32–33.

⁵⁹ Hopkins 1965, p. 32.

⁶⁰ Hopkins 1965, p. 32.

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A Trainee and a Skilled Ugaritic Scribe — KTU 1.12 and KTU 1.4

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Abstract

This paper deals with some of the writing methods which were used by the Ugaritic scribes who made tablets KTU 1.12 and KTU 1.4. Research was carried out using high resolution photographs. Both scribes dealt with the same problem of writing, and found different aesthetic ways in order to deal with it. This allows us to learn about the level of skill of these scribes, and suggests that tablet KTU 1.12 was a scribal exercise, while tablet KTU 1.4 was made by a more experienced scribe.

Making clay tablets for the purpose of writing was a task which required much premeditation: How thick should a tablet be? How should the size of a tablet be matched to its content? Should a scribe divide the tablet into rows or columns? Many of the tablets that were found in Ras-Shamra and Ras-Ibn-Hani reveal different methods of making clay tablets for writing the cuneiform Alphabet. It is quite clear that each scribe had his own tradition and methods of writing.

The tablets that were used for writing the great poetic and mythological texts were usually divided into units by separation lines, either horizontal or vertical.¹ This aesthetic method probably enabled the scribes to write horizontally more accurately,² and on some occasions, there was a connection between these lines to the content of the text.³ Whenever a scribe separated a tablet into columns, he needed the skill to determine their width. Columns that were made wide enough enabled the scribe: a) to write complete words inside the column's limits without separating them⁴, and b) To avoid writing over the separating lines between the columns.⁵ Sometimes, the last word in the row can even extend to the parallel column. Both examples we have chosen here present the methods used by two different scribes, a skilled and an unskilled one, in order to correct this unaesthetic phenomenon.

¹ See tablets KTU 1.1 – 1.6; 1.10; 1.100; 1.14 – 1.19; 1.20 – 1.24 and more. The numbering of tablets in this study is according to Dietrich, Loretz and Sanmartin 1976, 1995.

² And perhaps even facilitate the reader in order to locate a certain place in the text.

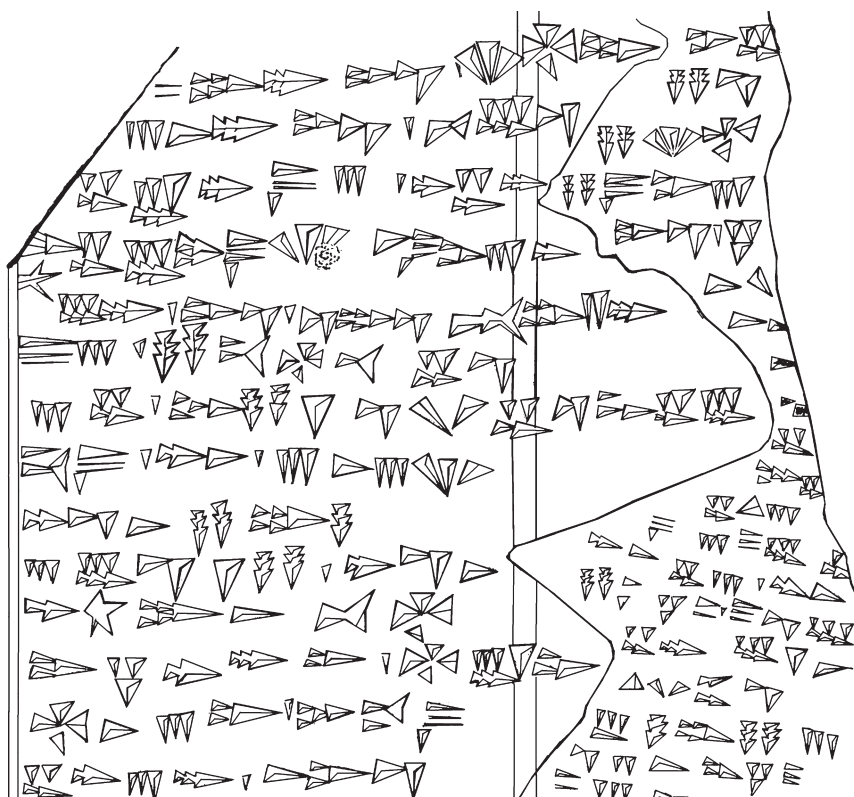
³ Examples: KTU 1.3, III, between rows 31–32; KTU 1.4, V, see the separation of rows 42–43; KTU 1.100; KTU 1.23, obverse; KTU 1.114, between rows 28–29; KTU 1.133, between rows 11–12.

⁴ See Segert 1987.

⁵ Cf KTU 1.1, II 20–26; KTU 1.3, III 5–13; KTU 1.4, IV 14–20; KTU 1.5, I 19–30; KTU 1.14, I, 21–26; KTU 1.14, II, 21–22; KTU 1.17, I, 12–17; KTU 1.22, I, 12–13 and more.

KTU 1.12 (CTA 12; RS 2. [012]; UT 75)

Although the tablet is partly damaged, this mythological text has been the basis of much debate ever since it was first translated by Virolleaud.⁶ He was the first to indicate that: a) when comparing the first and the second columns, it is apparent that the writing is not proportional. The letters of the first column are almost twice the size of the second one. b) Virolleaud also noted some small errors of misspellings.⁷ Here is a facsimile of KTU 1.12, I (7–20); II (10–29):



Only two partial columns survived from this tablet (Length: 19.5 cm, Width: 9.5 cm). The reverse side is blank, and it is impossible to determine how many columns are missing. It is apparent that this is the work of an unskilled scribe, and possibly a scribal exercise.⁸ The scribe

⁶ Virolleaud 1935; For further reading see Caquot, Sznycer and Herdner 1974, pp. 317–330; del Olmo Lete 2007; Dietrich and Oswald 2000, pp. 1–134; Gibson 2004, p. 134; Schloen 1993; Gray 1957, pp. 63–68; Wyatt 1998, pp. 162–168; Parker 1997, pp. 188–191.

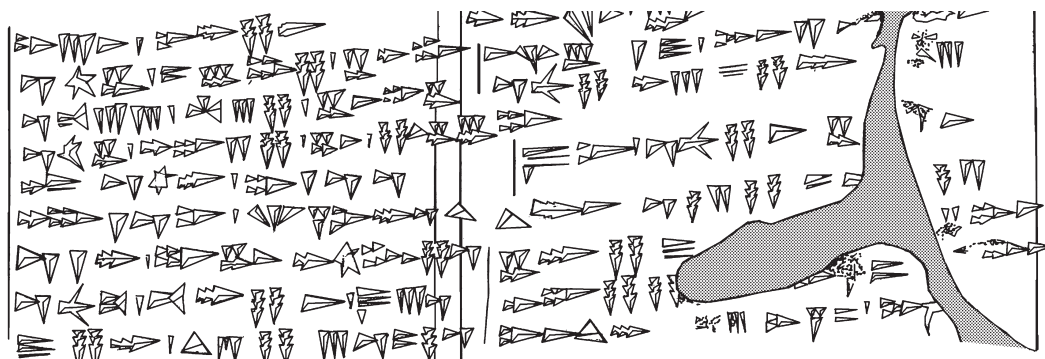
⁷ See the reuse of the letter *z* instead of *š* in the words: *zi* (I, 12); *wzi* (I, 19); *wymza* (I, 37); *mzah* (I, 50); *wmzah* (I, 51); *yzbq* (I, 12), and the error in the word *mdbr* (written as *mlbr* (I, 21). For further reading of paleographic and epigraphic studies on the alphabetic signs from Ugarit, see Elisson 2002.

⁸ See Schniedewind and Hunt 2007, pp. 33–37; Horowitz 1974.

attempted to determine the proper width of the first column, but when he started writing, he wrote the letters too large. As a result, many words are written over the separating lines between the columns, and extend over into column II. The scribe noticed (or was corrected by a master scribe) these errors, and wished to visually separate column I from column II, so he carved a long and curved line at the end of these rows. When he started writing column II, he diminished the size of his writing substantially, probably in order to squeeze in as many words as possible. Based on the phonological and aesthetic errors of writing, we suggest that the text was dictated to him, and was not copied directly from another tablet. Thus, we should be cautious in referring to the morphology and phonology of this text, which was probably read properly, but was then poorly written by the trainee.⁹

KTU 1.4 (CTA 4; RS 2.[008], 3.341, 3.347; UT 51)

This text was first translated by Virolleaud.¹⁰ The tablet (Length: 26 cm, Width: 22 cm) consists of several fragments, and it is widely agreed that it is one of the main parts of the “Ba’al Cycle”.¹¹ A partial colophon that was written on the left side of this tablet survived: [...]y . nqmd . mlk . ugrt. This colophon is similar to the one at the end of KTU 1.6: spr. ilmlkšbny... t’y . nqmd . mlkugr[t] (VI, 54–57). This and other evidence regarding writing style and the design of the tablet, suggest that KTU 1.4 was written by the same master-scribe, named Ilu-milku, who was probably one of the King’s scribes.¹² Here is a facsimile of KTU 1.4, I (15–23); II (20–27):



Even though Ilu-milku was a skilled scribe, his work was not free from errors. As well as the scribe of KTU 1.12, Ilu-milku also exceeded the limits of the column many times. He wrote

⁹ For further reading see Herdner 1963, pp. 52–55; Freilich and Pardee 1984; de-Moor 1987, pp. 128–134; Tsumura 1979.

¹⁰ Virolleaud 1932.

¹¹ For various opinions of the continuity of the “Ba’al Cycle”, see del Olmo Lete 1983, p. 83.

¹² His name also appears at the end of tablet KTU 1.16 (The KRT legend). For more on Ilu-milku, see Freilich 1992; Mazzini 2004.

on the separating lines, and even on the space of column II. However, his skill is demonstrated in the following ways: a) He did not change the size of his writing in column II in order to compensate for the errors of his writing. b) the letters *dr* at the end of the word *y'bd^r*¹³ (I, 18) were written on column II. The scribe chose to create a wide gap between rows 22–23 in column II to prevent any confusion. c) The most notable difference between these examples is the method of correcting the deviation of writing, by carving small vertical lines before rows 21–22; 23 and 25–27. The scribe wished to prevent any confusion between the end of the rows of column I and the beginning of the rows of column II.¹⁴ The curved line in KTU 1.12 appears amateurish compared with Ilu–milku's method.

Conclusions

The art of writing was complicated. The scribes needed to learn how to write in the proper form and size, and without spelling mistakes. Both tablets show different levels of self-evaluation in order to improve the writing skill. The unaesthetic appearance of the writing methods in tablet KTU 1.12, indicates that this tablet was not meant for rereading or to be copied from in the future, and this suggests that it was a scribal exercise. This fact should be considered in the study of special phonetic or morphological phenomena in this tablet. Tablet KTU 1.4, on the other hand, demonstrates the work of a skilled scribe, who was familiar with better methods which he employed in order to present his work for the reader.

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¹³ A difficult word which is usually translated by context. It refers to the title of one of Ba'al's daughters, called *arsy. br. y'bd^r*. See Watson 1993.

¹⁴ The exact same method is found in the Aqht legend (tablet KTU 1.19, between row 37 in column I and row 38 in column II).

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“Answer me Properly!”: Diplomatic Strategy and Subterfuge in the Treaty Texts from Mari

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Abstract

*This article examines how the exchange of unilateral treaty tablets in the Mari period was an opportunity for one treaty partner to exert or resist the political power of another. Building on D. Charpin's model, according to which drafts of a treaty ("small tablets") were exchanged first and were followed by final copies ("large tablets"), this study considers how this process plays out in the diplomatic texts from Mari. Some texts reveal the strategies and tactics — such as omitting unfavorable terms of the treaty, or delaying the process altogether — by which treaty partners sought to gain an advantage in the negotiations. In other texts one partner forestalls accusations of subterfuge by underlining his sincerity. All of these examples demonstrate the complexity of treaty negotiations and the opportunities it afforded for advancing political interests.**

Introduction¹

In his article on reading diplomatic correspondence J. Sasson argues that letters from the Mari archives demand caution, if not suspicion, of their readers.² The accounts found in these letters are not objective reportage but involve varied motivations, which are rarely made explicit. Although Sasson's point was intended as a caution to modern readers, his advice would have been equally appropriate for the ancient readers of these diplomatic letters, who undoubtedly parsed each sentence for semantic subtleties. This tradition of close reading now has the benefit of actual treaty texts from the Mari period, and their study alongside related diplomatic reports has enabled D. Charpin to propose a theory for how these treaties came to be ratified.³ Basing his argument primarily on a letter from Yarim-Addu to his king Zimri-Lim (ARM 26/2 372), in which the former describes how Hammurabi of Babylon executed a treaty with Šilli-Sin of Ešnunna, Charpin showed that alliances began with the partners exchanging “small tablets” (*tuppum šeḫrum*),⁴ which

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¹ Abbreviations in this paper include: *AHw* = von Soden 1965–1981; ARM 26/2 = Charpin *et al.* 1988; *CAD* = Gelb *et al.* 1956–2009; *GAG* = von Soden 1969; and LAPO 16 = Durand 1997.

² Sasson 2002.

³ Charpin 1988, pp. 144–145; see also Charpin 1990, pp. 115–118; Charpin 2004, pp. 301–303; Charpin 2008, pp. 141–142.

⁴ Both instances of this phrase in ARM 26/2 372 involve heavy restoration. In line 10 the phrase is reconstructed entirely but in line 14 only partially.

were essentially a first draft of the treaty. After committing themselves to these drafts by the symbolic gesture of “touching the throat” (*napištam lapātum*, and the related construction *tuppi lipit napištim*), the partners would then exchange “large tablets” (*tuppum rabûm*). This final draft required each partner to swear an oath by the god(s) (*nîš ilim zakārum*, and the related construction *tuppi nîš ilim*) in order to conclude the treaty. Thus treaties during the Mari period were established not through bilateral treaties, as was common in Hittite diplomacy, but through the exchange of unilateral treaties, which described the obligations incumbent on each partner.⁵

Because a theoretical model represents an ideal course of action, particular cases of diplomacy will inevitably show exceptions to the model. Charpin conceded as much when he first argued for the “small tablets” to “large tablets” procedure by acknowledging that in Hammurabi’s treaty with Atamrum of Andarig, which is also described in ARM 26/2 372, the Babylonian king appears to have skipped the *lipit napištim* and proceeded right to the *tuppi nîš ilim* (line 55). Charpin speculates that this variation is related to the imparity between the treaty partners, a proposal that F. Joannès also makes in his analysis of A.96 (= LAPO 16 291).⁶ Finally, J. Eidem has recently suggested that the *lipit napištim* involved actual blood-letting by the kings and thus was more than a symbolic gesture.⁷

In addition to these exceptions, we can discern in the treaty texts from Mari other, more subtle manipulations of the model Charpin has proposed. Whereas the model presumes the symmetrical negotiations between potential treaty partners,⁸ the letters they exchanged sometimes show discrepancies between the report of an oath performance and the text that compelled the oath. These variations, though slight, would have seriously affected the balance of power between partners, and although such discrepancies may be simply be “problèmes de synchronisation,”⁹ it is also possible to interpret these changes as deliberate attempts by one treaty partner to gain a strategic advantage in the alliance.

Just as significantly, one also encounters in the diplomatic correspondence of Mari no small degree of anxiety over changes to a prescribed oath formula. Instances where leaders react angrily to a discrepancy or scrupulously ensure a text’s integrity are instructive because they show that ancient readers were watchful of even minute modifications. If, as Sasson argues, close reading demands that readers — ancient and modern alike — be attentive to underlying motivations, then it also requires that we, like the ancients, appreciate the changes that occurred in the treaty process. The purpose of the present essay is to show how these changes may be understood as attempts by one treaty partner to gain an advantage over the other in the course of their negotiations. By studying the content of treaty oaths for what they include, what they omit, and how they are modified in the course of negotiations, we can observe the dynamics of power in the relationships that these treaties were meant to formalise. Such a study of diplomatic correspondence from Mari, specifically ARM 26/2 372, M.6435+M.8987, and A.96, will show how treaty negotiations were used as opportunities for power to be exerted and resisted.

⁵ See Beckman 2006.

⁶ Joannès 1991, p. 170.

⁷ Eidem 2008, pp. 311–314.

⁸ For example, Charpin (1988, p. 144) writes that the treaty process concludes when “chaque roi s’engage par rapport à un texte qui lui est soumis par son homologue” (see also Charpin 1990, p. 110).

⁹ Charpin 2004, p. 303.

ARM 26/2 372

Our discussion appropriately begins with the section of the letter on which Charpin bases his system of “small tablets” and “large tablets.”

lines 1–26
(1) [Speak to my lord: Thus (says) your servant] Yarim-Ad[du]: “[Concerning the] matter of the Ešnunakean, about whom Hammurabi gave me orders, I [have written] to my lord. (5) When Hammurabi [went] to Parsipa, Ešnunakean messengers arrived there but [did not meet] with him. A second day they stayed in his presence, and he made them stay overnight. He gave them an answer to their message and gave orders to Sin-[], son of Kakka-Ruqqum, and Mar[duk-Mušallim, son of] (10) and dis[patched them] with them. In their hands they took [a small tablet]. They will make [the Ešnunakean] touch his throat by [that] tablet. [] will come and here Hammurabi will touch [his throat]. After they have touched [their throats] by the s[mall] tablet, (15) Hammurabi [will send ¹⁰] a large tablet, the [treaty] tablet, to the Ešnunakean. He will make the Ešnunakean swear a sacred oath. [The Ešnunakean] will dispatch a large tablet, the treaty tablet, to Hammurabi. (20) They will est[ablish] an agreement between themselves. [The terms ¹¹] between Hammurabi and the Ešnunakean [are se]t, or at least close at hand, and it has acquired a face. Now, an answer to the report of the party of Sin-[] and Marduk-Mušallim did not yet come back from Ešnunna, and so I did not write on that matter to my lord. (25) After this tablet of mine I will write a full report to my lord, when it arrives from Ešnunna.”

Although this letter from Yarim-Addu to Zimri-Lim concerning Hammurabi’s tablet exchange with Šilli-Sin of Ešnunna appears to be a parade example of the system, in fact the report concludes with the alliance only partially complete. The report begins conventionally enough with Hammurabi sending the Ešnunakean messengers back to Šilli-Sin with a “small tablet” (line 10), according to which the delegation should make Šilli-Sin commit himself (*napištašu ušalpatū*, line 12). After Hammurabi commits himself likewise (lines 13–14), he will send a “large tablet, the treaty tablet” (*tuppam [r]abēm tupp[i] šimdatim*, line 15) to Šilli-Sin and will make the Ešnunakean swear a sacred oath (*nīš ilim ušazk[ar]*, line 17). In turn, Šilli-Sin will send Hammurabi a “large tablet, the treaty tablet” (lines 18–19), but here the symmetry ends. According to Charpin’s model one would fully expect Hammurabi to conclude the alliance by swearing a sacred oath, but this crucial act has been omitted from the report altogether.¹² Instead Yarim-Addu notes that the terms are set (lines 20–21), and even that report he qualifies by explaining that they are “at least close at hand, and it has acquired a face” (*ūlašūma qerbiš pānam irše*, lines 21–22). The word *ūlašūma* is meant to clarify the previous clause and to indicate to Zimri-Lim that the alliance is not quite complete. Similarly, the adverb *qerbiš*, which could be understood temporally (*i.e.*, the

¹⁰ Restoring *ušabilamma*, though J. Lauinger (personal communication) suggests *itarradma* instead (*cf.* line 19).

¹¹ Here Charpin (1988, p. 180) restores *riksātum* “alliance” as the subject, but I follow Heimpel (2003, p. 326 n. 138) who argues for “terms,” noting that the alliance cannot *have been* established if the previous sentence states that it *will* be established.

¹² This omission goes unnoticed by Charpin (1988, p. 144), who writes that “symétriquement, Šilli-Sin enverra une «grande tablette» à Hammu-rabi, qui prêterait serment à son tour.” This assessment is repeated almost verbatim by Lafont (2002, p. 274), who writes that “réciproquement, Šilli-Sin enverra une «grande tablette» à Hammu-rabi, qui prêterait serment à son tour (l. 17–19),” then adds that “ce n’est qu’une fois cette dernière étape accomplie qu’une alliance officielle...sera réputée être établie entre eux.”

treaty will be completed in the near future)¹³ or substantively (*i.e.*, the current terms are close to their final articulation), indicates closeness without completion. Although part of the treaty is set (*šaknā*) and its scope is clear enough (*pānam irše*),¹⁴ the messenger unambiguously reports that the treaty has not been ratified.

The negotiations are at an intermediate stage of the system articulated by Charpin, during which the terms of the treaty are worked out, and if we accept that treaty oaths underwent multiple drafts, it is not surprising to find one partner reacting to the terms issued by his counterpart. One may even interpret Hammurabi as withholding his final oath as an objection to the terms that appear in his “large tablet.” While the messenger’s silence on this final oath is hardly proof of its absence, it is possible to see here an attempt by Hammurabi to press his advantage as the ultimate oath-taker. Although Charpin and Lafont both emphasize the “*façon parfaitement symétrique*” of the treaty process,¹⁵ in fact Hammurabi holds Šilli-Sin in the vulnerable position of having already committed himself and depending on Hammurabi to match his oath. Until he does, it is an alliance of gross imparity for Šilli-Sin. We can only speculate if Hammurabi planned to change the terms — the messenger Yarim-Addu seems to think not — or perhaps he was stalling the process, just as he had put off the Ešnunakean messengers for two days after they arrived (lines 6–7). Whatever the case, the messenger’s account suggests an effort by Hammurabi to accentuate his upper hand in the treaty process. As subsequent texts will make clear, such tactics were an integral part of treaty negotiations.

Indeed this interpretation is supported by a report in the same letter, which recounts the negotiations between Hammurabi and Atamrum of Andarig.

lines 47–60
<p>“Zimri-Samas, servant of Atamrum, took (to the road) with the convoy of Ekallatum and arrived [at] Babylon. Atamrum wrote thus to Hammurabi: ‘Šu-Eštar and Marduk-Mušallim, servants of my father (50) arrived before me and [brought] a message of my fat[her]. I paid careful attention to the message that my father wrote. The [gifts] that my father sent — garments, a dress, a headdress, a chair and [] — I saw [in] the men’s hands. I was very happy. The garments and [] I put on, and I sat in the chair that my father sent me. I will always invoke blessings [upon my father]. (55) Concerning the tablet of the sacred oath which my father sent me, o[n that tablet there are¹⁶] additional gods and additional words. [I do not] any additional gods or [additional wo]rds. On that tablet is written as fo[llows]: “You will be an enemy [to my enemies; you will be at peace] with those who are at peace with me.” This my father wrote to me.”</p>

In this report Yarim-Addu quotes a tablet Atamrum had sent to Hammurabi in which the former describes his receipt of the *tuppi nīš ilim* (line 55). Though his comments concerning the tablet are broken, his remarks clearly concern changes that have been made, namely, additional

¹³ See *AHw*, *qerbiš* I (p. 914); also *CAD* Q, *qerēbu*, mng. 1c (pp. 229–230).

¹⁴ See *AHw*, *rašū(m)*, mng. 15a, “deutlich (erkennbar) werden” (p. 962); also *CAD* R, *rašū* A, mng. 7a (pp. 202–203) and mng. 11a (p. 206).

¹⁵ Lafont 2002, p. 274.

¹⁶ So Heimpel 2003, p. 326 n. 140. Charpin (1988, p. 180), on the other hand, restores a negative particle, indicating that no deities or words have been added, but one must ask why Atamrum would state there are no excessive deities or clauses, then redundantly declare that he desires no other. Furthermore, if Atamrum’s desire and the oath tablet he received matched so agreeably, why did he apparently not swear the oath to Hammurabi’s satisfaction?

deities and words (line 56). Atamrum goes on to quote one of the stipulations that had been (newly?) included in his *tuppi niš ilim*: “You will be an enemy [to my enemies; you will be at peace] with those who are at peace with me” (lines 58–59).

Despite these apparent changes, Atamrum was made to take an oath (*ušazkirūninni*, line 63), but even though his happy acceptance of Hammurabi’s gifts suggests his acceptance of the new terms, Atamrum is never explicitly said to have sworn according to the *tuppi niš ilim* he had received. On the contrary, in recounting his oath, Atamrum quotes the three stipulations he swore, none of which correspond to the stipulation he had just quoted in lines 58–59. Perhaps that stipulation was one of the “extra words” about which Atamrum complained in line 56, and by omitting it from his oath he is asserting his ability to influence the treaty negotiations. Such selectivity prompts a strong reaction from Hammurabi: “You, swear the sacred oath! Answer me properly! (*[a]ttā niš ilim zuke[ram i]šariš aplamma*),” he orders Atamrum at the end of the letter (ARM 26/2 372: 77).

Just as in the negotiations between Hammurabi and Šilli-Sin we see here an intermediate stage of negotiations in which each partner vies to shape the treaty terms to his advantage. In both episodes we have observed a discrepancy between what was issued on a treaty tablet and what was actually included in an oath ceremony.

Furthermore, the oath was used in both as a bargaining tool to influence negotiation, but unlike the first case, in which Hammurabi possibly withheld his oath to press his advantage, the second case shows how a less powerful partner can use the oath to neutralize such an advantage. When Charpin’s model of “small tablets” and “large tablets” is applied to particular diplomatic episodes, the negotiating tactics of treaty partners become apparent. As a close reading of ARM 26/2 372 has shown, partners naturally sought treaty terms that would serve their respective interests.

M.6435+M.8987 (= LAPO 16 290)

Another episode that illustrates the political posturing involved in the treaty process is the alliance between Hammurabi and Zimri-Lim. At the center of this pact is the text of an oath (M.6435 + M.8987 = LAPO 16 290), in which Hammurabi commits himself to an alliance with Zimri-Lim against the Elamite king Šiwapalarhuhpak.¹⁷

- (1) [Sw]ear by Šamaš of the heavens, [sw]ear by Addu of the heavens,¹⁸
by these gods, Hammurabi, son of Sîn-muballiṭ, king of Babylon:
(5) “From this day as long as I am a[live],
I will be an enemy of Šiwapalarhuhpak.

¹⁷ Durand 1986.

¹⁸ In his LAPO edition Durand (1997, p. 452 n. 93) reconstructs ^dutu ša ša-me-e [t]a*-ma, ^dIM ša ša-me-e [t]a*-m[a*]. Previously, he had reconstructed lines 1–2 as “^dUTU ša ša-me-e [E]N ma-[tīm]/^dIM ša ša-me-e [E]N p[u-ru-us-se]” (Durand 1986, p. III), but the new reading is supported by A.361 (=LAPO 16 292), a treaty whose first ten lines consist of the command to swear (*tama*) by certain deities, and by M.7750 (= LAPO 16 293), a fragment consisting of ten lines, each with the command to swear (*tama*) by a deity, one of whom is ^dim ša šamê (see Joannès 1991, pp. 176–177). Similarly, the treaty sworn by Hazip-Teššup of Razam to Mutija of Apum opens with the repeated command to swear by at least fourteen deities, including three “of Heaven” (see Eidem 2008, pp. 316–17). Finally, the case for the imperative *tama* is strengthened by comparable uses of *zakāru* in the imperative (ARM 26/2 372:77; LAPO 16 286:3') and also instances where a treaty partner is made to swear an oath (*zakāru* Š-stem; cf. ARM 26/2 372: 17, 63; LAPO 16 286: 9–10; ARM 26/2 404:62).

My [serv]ants, my [messe]ngers
 I will not have ac[company his servants]
 (10) I will not send them [to him].
 Without (the consent of) Zimri-[Lim], king of Mari and [the land of nomads],
 I will not make peace with Šiwapala[rhuhpak].
 (15) [If] I inte[nd] to make peace with Šiwapalar[huhpak]
 I will consult Zimri-Lim, son of Yahdun-Lim, king of Mari and the land of nomads.
 (20) Whether or not p[ea]ce will be made with Šiwapala[rhuhpak],
 we will make pe[ace] together.
 This oath by my gods, Ša[maš] and [Addu], (25) which is sw[orn] to Zimri-L[im, son] of Yah[dun-Lim],
 king of Mari and the la[nd of n]omads, I co[m]pose (for him) and approach him in good faith and with
 complete sincerity.”¹⁹

The content of the letter is the oath that Zimri-Lim demands Hammurabi swear; the fivefold terms of this oath display a distinctly patterned phraseology:

Term 1 – Enemy for life (lines 5–7)
(A) Condition (duration of oath) (B) <i>itti Šiwapalarhuhpak</i> (C) <i>lū + nakāru</i>
Term 2 – No messengers (lines 8–9)
(A) Object (servants/messengers) (B) <i>itti [wardišu]</i> (C) <i>lā + šabātu</i> (Št) (A') Object (<i>šunūti</i>) (C') <i>lā + šapāru</i>
Term 3 – No solo peacemaking #1 (lines 9–14)
(A) Condition (without Zimri-Lim) (B) <i>itti Šiwapalarhuhpak</i> (C) <i>lā + salāmu</i>
Term 4 – No solo peacemaking #2 (lines 15–19)
(A) Condition (<i>šumma itti Šiwapalarhuhpak...</i>) (B) <i>itti Zimri-Lim</i> (C) <i>lū + šālu</i> (Gt)
Term 5 – No solo peacemaking #3 (lines 20–23)
(A) Condition (<i>šumma lā salāmu</i>) ²⁰ (B) <i>itti Šiwapalarhuhpak</i> (C) <i>lū + salāmu</i>

¹⁹ Reading for lines 27–29: *ina damiqtim libbim gamrim lū akašsar-ma, lū asannišum* (LAPO 16 290, n. 94); see also the below discussion of A.96: 11'.

²⁰ Charpin (1990, p. 112 n. 17) reconstructs *šum-ma sa-la-mu-um* meaning if, after consultation, the two allies decide on peace, then that peace will be concluded together.

All of these statements can be unmistakably recognized as promissory oaths by their use of *lū* and *lā*: the former is commonly used for positive oaths, and the latter, when paired with a subjunctive verb and in the absence of a subordinating conjunction, can only indicate a negative oath.²¹ Although there is imperfect balance in the use of *lū* and *lā*, these oaths clearly follow a formal pattern of (A) some condition/object; then (B) *itti* + PN; and finally (C) *lū/lā* + main verb.²² Such formality in language suggests that these were precisely the oaths they expected Hammurabi to swear.

In Durand's publication of this text he argued that "ce document ne doit pas être considéré, à proprement parler, comme un texte officiel," and that "nous avons avec M.6435+M.8987, un *projet* de traité et que la Chancellerie mariote a transmis un modèle souhaité pour l'engagement diplomatique de Hammurabi, tout en en gardant un double."²³ While Durand is right that M.6435+ likely represents a draft or a copy of a letter sent to Hammurabi, and therefore is not an official treaty text, the letter nonetheless seems to contain the official language of the oath Hammurabi was to perform. Moreover, since oath performances, rather than written texts, constituted the foundation of ancient diplomacy,²⁴ the importance of M.6435+ lies less in its status as a document and more in what it reveals about Hammurabi's projected oath.

Having already observed in ARM 26/2 372 discrepancies between the oath taken and the oath reported, we should not be surprised to find such discrepancies are at issue in M.6435+. In a telling detail, the final lines of the text direct Hammurabi to confirm that he has sworn the preceding oath in complete sincerity (lines 27–28).²⁵ Although this request may simply be a formulaic conclusion to such oaths (see A.96 below), Zimri-Lim's demand for sincerity may also reflect his attempt to maintain the balance of their negotiations by forestalling the sort of tactics that are apparent in ARM 26/2 372 and other letters, such as A.4626²⁶ and ARM 26/2 469+ARM 2 77. These letters, which address different circumstances and events from M.6435+, indicate that Zimri-Lim was right to be concerned about Hammurabi's political maneuvering.²⁷

The first of these letters, A.4626 (=LAPO 16 286), finds Zimri-Lim having already committed himself to Hammurabi by a sworn oath (lines 15–16) and thus in a rather vulnerable position until Hammurabi reciprocates. Instead of relieving this imbalance, Hammurabi insists that the proper flour be brought to accompany his oath. It is of course possible that religious piety dictated his attention to ritual detail, but the messenger's exasperation in line 17 — "Why don't you swear at the same time?!" ([*in*] *anna mīnum idumma atta ištēn[iš lā tazakkar]*) — certainly gives the impression that Hammurabi's stall was some sort of political ploy, a situation reminiscent of the stalled Ešnunakean messengers in ARM 26/2 372: 6–7.

²¹ GAG §185; see also Huehnergard 2000, pp. 437–438.

²² The content of Zimri-Lim's oath and Hammurabi's intended reciprocal oath, as reported in A.4626: 13–16, is similarly written: (B) *itti* + PN and (C) *lā* + main verb.

²³ Durand 1986, p. 115.

²⁴ Eidem (*apud* Charpin 1990, p. 111) has written, "l'accent portait sur la déclaration orale faite par chaque souverain et sur la cérémonie elle-même, plus que sur le texte écrit, et il semble vraisemblable que seuls quelques traités étaient en fait couchés par écrit" (see also Eidem 2003, p. 750). Charpin (2008, pp. 131, 141–142) and Westbrook (2003, p. 84) have likewise emphasized the primacy of the oral performance of oaths in ancient diplomacy.

²⁵ Reading *nīš ilīya* (line 24) as the object of *lū aka[ššar-ma]*, *lū asanniq* [...] (lines 28–29).

²⁶ Charpin 1990, pp. 109–118.

²⁷ However, Charpin (1990, p. 112) and Lafont (2002, pp. 279, 284) argue that the three texts deal with a single diplomatic episode.

In a separate incident recounted in ARM 26/2 469+ (= LAPO 16 287), Hammurabi objects to taking the oath on the twenty-fifth day. Again he provides a pious explanation for his delay, here because the mention of Sin on the *tuppi lipit napištim* (line 12) has somehow made the day nefarious. Although in ARM 26/2 469+ we have no sign of the messenger Abi-Mekim's impatience, a certain pattern of behavior is emerging for Hammurabi: in both A.4626 and ARM 26/2 469+ he is preparing to swear an oath that Zimri-Lim has already sworn — an advantageous position since parity depended on replication. By stalling and putting off oath ceremonies he pressed this advantage at the expense of Zimri-Lim and his messengers.

Significantly, ARM 26/2 469+ ends with that parity still in doubt, as Abi-Mekim anxiously warns Zimri-Lim not to trust the Babylonian representatives and to await his full report of the sacred oath (*tēm niš il[ī gam]ram*, line 37) before Zimri-Lim touches his own throat. Lafont thinks the messenger is afraid Zimri-Lim will somehow invalidate the oath,²⁸ but it is just as likely that Hammurabi's oath failed to conform in some way to the terms of their alliance. Abi-Mekim's concern that Babylonian representatives present in Zimri-Lim's court will urge the king to swear as Hammurabi has sworn (lines 31–33) is rooted in fear that his king will commit himself to terms that Hammurabi has not himself sworn.

This interpretation is supported by another similarity between A.4626 and ARM 26/2 469+, namely, their common preoccupation with the accurate reporting of a sworn oath. In A.4626, for example, the messenger is so adamant that Hammurabi's oath should match Zimri-Lim's that he twice commands him to swear "in the same way (*qatam*) my master has sworn" (lines 3, 15), even quoting Zimri-Lim's oath and having a Babylonian on hand to confirm the content (lines 12–13). As for Hammurabi, he appears equally interested in having the proper wording. When he finally agrees to swear, he declares: "So I will write, and may your master swear in the same way (*qatam*) as I swear" (lines 10–11). As we have seen all through the texts surveyed so far, treaty partners are frequently concerned that their counterpart adhere to the terms, as they have been documented.²⁹ Thus it would not be surprising if Abi-Mekim's anxiety in ARM 26/2 469+ had to do with a deficient oath. Already in the text he and Hammurabi have argued and failed to reach an agreement over the topic of Hīt (lines 6–10). A "full report of the sacred oath" might very well include what Hammurabi has omitted.

To sum up, the three texts just discussed, all of which deal with the diplomatic relations between Mari and Babylon, illustrate the power and flexibility of the oath in treaty negotiations. Far from being a mere formality for ratifying written agreements, the oath was at the center of the negotiations. An oath performed in good faith could stabilise the parity in a potential alliance, as Zimri-Lim no doubt hoped M.6435+ would, or it could be used as an opportunity to assert pretensions of power, as Hammurabi likely intended by his actions described in A.4626 and ARM 26/2 469+. Just as importantly, the texts reveal a preoccupation with the proper agreement between an oath's performance and its written representation. The assurance dictated at the end of M.6435+ and the emphasis in A.4626 that both partners swear in the same way show that failure to "stick to the script" was cause for concern in diplomatic relations. If the second partner in a treaty amends an oath already sworn by the first, the treaty's parity would be compromised as would the political footing of the first partner.

²⁸ Lafont 2002, p. 279.

²⁹ See Anbar 1991.

A.96 (= LAPO 16 291)

Another episode that illustrates the intricacies of diplomatic correspondence is the exchange describing Atamrum of Andarig's commitment to Zimri-Lim.

(1) By Šamaš of the hea[vens] Atamrum, son of Warad-Sîn, king of Andarig swore:
 “From this day (5) as long as I am alive,
 I will [not] be disloyal (*ugallalu*³⁰) to Zimri-Lim, son of Yahdun-Lim, [kin]g of Mari and the land of the nomads, nor to h[is city], his army or his land, (10)
 and [I will not xxxxxx³¹] Zimri-Lim, son of Yahdun-Lim, [king of Mari and the lan]d of the nomads.
 (...one or two lines missing...)
 (1') (I swear that) what I have [writ]ten [to Zi]mri-Lim, son of Yahdun-Lim, [king of Mar]i and the land of the nomads, I have not written to h[im] with chicanery or a nefarious sign.³²
 (6') (I swear that) I have written to him with complete sincerity. The friendly words that [I have sworn] to Zimri-Lim, son of Yahdun-Lim, (10') king of Mari and the land of the nomads, I compo[se for him] and approach h[im] in comp[lete] sincerity.

Already we have discussed the description of Hammurabi's indignation over Atamrum's incomplete oath; now we can compare those events with the Ešnunnaean political interactions with Zimri-Lim. A.96 features the text of an oath sworn by Atamrum,³³ the content of which is twofold: (1) he will not act disloyally against Zimri-Lim, his city, his army, or his land (lines 6–9); and (2) more personally, he will not neglect Zimri-Lim himself (lines 10–12). Although the terms do not feature all of the characteristics identified in M.6435+, there is a discernible structural consistency to the oath, namely, each term begins with a prepositional phrase, which is introduced by *ana*, and concludes with *lā* + main verb. This uniformity and the preterite form *itma* in line 3 leave no doubt that this oath had been performed and represented a binding act of diplomacy.

However, A.96 is most interesting for what it describes on the reverse of the tablet. There Atamrum swears another oath, this time assuring that what he has written to Zimri-Lim ([*ša ana Zi]mri-Lim...[ašpu]ru*, lines 1'–3'), he has not written falsely or with an inauspicious omen ([*ina*

³⁰ The basic meaning of Akk. *gullulu* is “to commit a misdeed” (see *CAD* G, pp. 131–132), but the translation “to be disloyal” is suggested by the verb's use in Old Babylonian to describe the transgressions of a betrothed woman (e.g., CT 48 56:18; see Westbrook 1988, pp. 33–34).

³¹ Joannès (1991, p. 169) reconstructs *mi-im-ma la ú-ḥa-aṭ-ṭú-ú* for line 12, claiming that it fits the general sense of the text. Perhaps, but any reconstruction remains highly speculative, and the line is best left blank.

³² Cf. Joannès (1991, p. 169; see also Durand 1997, p. 453) who translates [*ina iw*] *īrim u idat lemuntim* as “par mensonge ni malveillance.” In my opinion, the word *iwītu* (< *ewû* “to change”) is best understood not as an outright lie but, more subtly, as a misrepresentation of the terms that have been sworn (cf. “fraud,” *CAD* I–J, p. 317). The word *ittu*, meaning “omen, sign,” is commonly paired with *damiqtu* or *lemuttu* to denote auspicious or inauspicious signs (*CAD* I–J, pp. 306–307). A close parallel for the entire phrase occurs in ARM 26/2 404:53 (see below).

³³ Joannès 1991.

iw]ītim u idat lemuntim, line 4'). This meaning is confirmed by the next sentence in which Atamrum further insists that, on the contrary, he writes in complete sincerity (*ina libbiya-ma gamrim*, line 6').³⁴ This second statement's similarity to Hammurabi's declaration at the end of M.6435+ is apparent, but all the more remarkably Atamrum concludes the tablet by stating *lū asanniq[um]*, *lū akaš[aršum]* (lines 12'–13'), an almost exact restatement of Hammurabi's declaration. Again it is possible that such declarations are simply formulaic, but combined here with Atamrum's denial of any textual misrepresentation, even formulaic statements can help inspire confidence in the reader that the oath which is written on the tablet is exactly what was performed.³⁵ In M.6435+ and A.96, a treaty partner anticipates his counterpart's misgivings over discrepancies in a written tablet and tries to alleviate those misgivings by guaranteeing the tablet's accuracy.

The suspicion of misrepresentation is referred to in another one of Atamrum's diplomatic enterprises. In ARM 26/2 404 we read Yasim-El's report to Zimri-Lim regarding a congregation of neighbouring kinglets, including Atamrum, in Šidqum. Atamrum wants to attack Hammurabi of Kurda but first needs assurance that Aškur-Addu will support this action or at least remain neutral.³⁶ In making his case against Hammurabi of Kurda, Atamrum expresses concern that he will use "a treacherous sign or chicanery" (*ina idat sar[ti]m u iwītim*, line 53) to cause the release of Aškur-Addu's territory and also cause enmity between Atamrum and Aškur-Addu. Significantly, "treacherous sign or chicanery" is nearly the same phrase used by Atamrum in A.96 to deny any deceit and to assure Zimri-Lim of his honesty, but in this text he is using it to malign his enemy. Because Hammurabi of Kurda was excluded from the present congregation (lines 51–52), the accusation cannot refer to the oaths exchanged at Šidqum, but probably refers to some alliance Aškur-Addu had made with Hammurabi or was intending to make. Atamrum's effort to demonstrate Hammurabi's untrustworthiness is focused on the latter's propensity for misrepresenting oaths.

The letters concerning Atamrum's diplomatic efforts again demonstrate the range of information supplied by treaty texts. While they are valuable for the content of the oaths sworn between treaty partners, their value does not lie exclusively in *what* was sworn; one should also consider *how* they were sworn. Sometimes the terms were set and oaths were sworn forthrightly, and in those cases the treaty partners underline their scrupulousness. At other times, however, the exchange of tablets, during which oaths were sworn in preparation for the final sworn ratification of an alliance, was fraught with guile as partners sought to steer the terms of the treaty to their favor. We have attempted here to show that through this process of negotiation one can observe the shape of an alliance as it is being formed. The texts discussed reveal that these negotiations were an opportunity for power to be asserted and resisted. Because the process involved the exchange of unilateral treaties rather than bilateral treaties, one treaty partner depended on his counterpart to report his oath performance accurately and to fulfill his reciprocal oath faithfully.

³⁴ Joannès (1991, p. 169) translates "sans arrière-pensée." See also Stol 1993, pp. 246–249.

³⁵ Similar phrasing occurs in a text (M.5719) recently published by D. Charpin (2010), which he classifies as a "protocol de serment" that would be read by a palace functionary before serving the king. After swearing to various terms of service, the functionary confirms in lines 9–10 that he makes his oath in complete sincerity (*i-na li-ib-bi-'ia' [ga-am-ri-im] ka x a x-šum lu-ú ú-sa-ni-iq-šum*).

³⁶ Joannès 1988, p. 258.

Genuine parity was only achieved when symmetry prevailed, and as the above texts indicate, such reciprocity could not be taken for granted. Quite often discrepancies arose between an issued tablet and the oath it produced, and even when terms are set, one treaty partner can assert his superiority through political maneuvers, as when Hammurabi mistreats various envoys. Treaty texts are undoubtedly important, but they should not prevent an appreciation for other aspects of alliance-building that are equally instructive, even if they are less apparent in the body of diplomatic correspondence.

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The Day of Atonement and Yawm ‘Āshūrā’: From Assimilation to Differentiation

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Abstract

*The Islamic tradition of differentiating Muslim practices from those of other monotheists has been neglected by scholars. Although early Islam started out imitating Jewish traditions of fasting, it eventually sought to differentiate itself from Judaism, creating a set of new customs in regard to fasting, which were more lenient than those of Judaism. In this article, I will attempt to examine some of the specific Jewish sources that may have motivated Muslims to adopt customs that were the opposite of Jewish customs regarding fasting.**

Introduction

In the *ḥadīth* literature there are two contradicting commandments ascribed to Muḥammad. The first is “You shall follow the practices of those before you, inch by inch and mile by mile, to the degree that if they enter into the hole of a lizard, you will follow them” (*la-tattabi‘unna sunan allādhīna man qablikum shibr^{an} bi-shibrⁱⁿ wa-dhirā^{un} bi-dhirāⁱⁿ ḥattā law dakhalū fī ḥujr ḍabbiⁿ la-ttaba‘tumūhum*). He was asked [by those present]: “O Allāh’s messenger, [are they the] Jews and Christians?” He replied: “Who else?” (*fa-man?*).¹ The second commandment ascribed to Muḥammad in the *ḥadīth* is “Beware of Allāh and do the opposite of the Jews” (*i’ttaqū Allāh wa-khālifu al-yahūd*).²

The long relationship between Judaism and Islam has been a complex and varied one. Most of the works that have been written about the subject have dealt with the direct influence Judaism exercised on Islam.³ A few scholars dealt with another relatively neglected aspect of the relationship between Islam and Judaism, Islam’s rejection of Jewish practices by doing the opposite (*mukhālafa*).

The first scholar to deal with the subject of how Muslims differentiated themselves from other monotheists was Ignaz Goldziher (1850-1921).⁴ Goldziher was followed by only a handful of scholars: Arent Jan Wensinck (1882-1939)⁵ and Georges Vajda (1908-1981). The latter expanded on Goldziher’s work in an article published in 1894.⁶

The issue of *mukhālafa* was neglected by scholars for fifty years until 1989, when Meir Jacob Kister (1914-2010) published “Do Not Assimilate Yourselves... *Lā Tashabbahū*...”. To the best

* I would like to thank to the two anonymous readers for their excellent suggestions and criticisms, although I have chosen to retain a significant number of my original claims. I also extend my gratitude to Jacob Segal for his comments on this article.

¹ al-Qushayrī 1955, vol. 4, p. 2054 (*ḥadīth* no. 6); al-Bukhārī 1950, vol. 3, p. 126.

² See e.g. Ibn Taymiyya 1992, p. 50.

³ E.g., Geiger 1970; Torrey 1933; S.D. Goitein 1975.

⁴ Goldziher 1894, pp. 75-94; Goldziher 1901, pp. 1-29.

⁵ Wensinck 1914, pp. 62-80.

⁶ Vajda, 1937, pp. 57-127.

of my knowledge, no scholarly work focusing on the issue of *mukhālafa* has been published since Kister's study with the exception of a recently published article by the present author.⁷

Goldziher cited many *ḥadīths* in which Muḥammad ordered the Muslims to differentiate themselves from the Jews regarding fasting;⁸ but did not juxtapose the relevant Jewish and Islamic sources that prove his case, nor did he attempt to trace the motivation behind the differentiation. A comparison of the Jewish and Muslim traditions regarding fasting reveals that the latter are almost completely differentiated on issues like the date of the fast, its duration, and the prohibitions during the fast. On these issues, differentiation was accomplished by leniency (*rukḥṣa*).⁹

In this article, I will attempt to examine some of the specific Jewish sources that may have motivated the Muslims to adopt customs that were the opposite of Jewish customs regarding the Day of Atonement.

The Date of the Fast

ʿAbd Allāh b. ʿAbbās (d. 688 CE) claims in one *ḥadīth* that when Muḥammad first came to Medina, he saw the Jews fasting on *yawm ʿāshūrā*. Muḥammad said, “‘This was the day upon which Allāh drowned the soldiers of Pharaoh, and so Moses fasted on it. We (i.e. the Muslims) have a better right to Moses than you have’ (*naḥnu aḥaqq wa-awlā bi-Mūsā minkum*) and he fasted and ordered the people to fast with him.”¹⁰ Ultimately, Muḥammad made *yawm ʿāshūrā* optional and replaced it with the month-long fast of Ramaḍān.¹¹

Islamic sources argue that Muḥammad decreed that *yawm ʿāshūrā* would fall on the tenth day of the month of Muḥarram, the first month of the Muslim calendar, and that he took the ritual from the Jews. For this reason Western scholars have concluded that he did so in imitation of the Jewish Day of Atonement (*yōm ha-kīppūrīm*) which occurs on the tenth day of the first Jewish month, *Tishrey*.¹²

Ibn ʿAbbās narrated that when Muḥammad fasted on *yawm ʿāshūrā* and commanded that it should be observed as a fast, some of his Companions said to him: “O Allāh’s messenger, it is a day which the Jews and Christians hold in high esteem. Thereupon he said: When the next year comes, God willing, we will observe the fast on the ninth; but he died before the advent of the next year” (*idhā kāna al-ʿām al-muqbil — in shāʾ Allāh — ṣumnā al-yawm al-tāsiʿ. qāla: fa-lam yaʿti al-ʿām al-muqbil ḥattā tuwuffiya rasūl Allāh*).¹³

⁷ Mazuz 2012, pp. 204–223. See also Mazuz 2013 a. For a detailed survey of *mukhālafa* in research and its importance in Islamic literature, see Mazuz 2012, pp. 206–211.

⁸ Goldziher 1894, pp. 80–84.

⁹ Thus far, the most comprehensive work published on the subject of *rukḥṣa* is Maghen 2006.

¹⁰ al-Qushayrī 1955, vol. 2, p. 796 (*ḥadīth* no. 128); al-Bukhārī 1950, vol. 1, p. 498; Ibn Māja 1952, vol. 1, p. 552; al-Sijistānī, 1952, vol. 1, p. 569; al-Dārimī 1966, p. 201 (*ḥadīth* no. 1722); Ibn Abī Shayba 1989, p. 474; al-Ṣanʿānī 2000, vol. 4, p. 223 (*ḥadīth* no. 7874).

¹¹ al-Qushayrī 1955, vol. 2, p. 792 (*ḥadīth* no. 113). *Fa-lammā furīda Ramaḍān taraka yawm ʿāshūrā fa-man shāʾa ṣāmahu wa-man shāʾa tarakahu*. See al-Bukhārī 1950, vol. 1, p. 31. *Yawm ʿāshūrā* and the direction of prayer were the first two Jewish customs abrogated by the Muslims (*kāna awal mā nusikha shaʾn al-qibla waʾl-ṣiyām al-awwal*). See al-Māwardī 1982, vol. 1, p. 197.

¹² See e.g., Katsh 1963, p. 404. *EP*, s.v. ‘Āshūrā’ (M.H. Reid).

¹³ al-Qushayrī 1955, vol. 2, pp. 797–798 (*ḥadīth* no. 133); al-Sijistānī, 1952, vol. 1, p. 569.

In another version of this *ḥadīth*, Muḥammad says: "If I live until the next [year], I would definitely observe the fast on the ninth, i.e. with *yawm 'āshūrā'*" (*la-'in baqītu ilā qābilī¹⁴ la-aṣūmanna al-tāsi'*, *ya'nī ma' yawm 'āshūrā'*).¹⁴ This *ḥadīth* appears in *Ṣaḥīḥ Muslim*, one of two most reliable *ḥadīth* collections, but its reliability is questionable, because it contradicts the tradition mentioned at the beginning of this section, which states that Muḥammad began fasting on *yawm 'āshūrā'* when he arrived at Medina, i.e., in 622 CE, ten years before he died.

In another *ḥadīth* narrated by Ibn 'Abbās, Muḥammad says, "Fast on the ninth and the tenth, and do the opposite of the Jews" (*ṣūmū al-tāsi' wa'l-'āshir wa-khālifū al-yahūd*).¹⁵ Still another *ḥadīth* quotes Muḥammad as saying, "Fast on *yawm 'āshūrā'*, but in order to differentiate from the Jews fast one day before [i.e., the ninth] and one day after [i.e., the eleventh]."¹⁶

Lev. 23:32 states, "It shall be unto you a Sabbath of rest, and ye shall afflict your souls: in the *ninth day of the month* at evening, from evening unto evening, shall ye celebrate your Sabbath." The Talmud says that R. Hīyyā b. Rav from Dīfī interpreted this verse as follows:

'And ye shall afflict your souls: on the *ninth day*,' but is it on the ninth that we fast? Why, it is on the tenth that we fast! Rather, this verse comes to tell you that whoever eats and drinks on the ninth, scripture treats him as if he had fasted on the ninth and on the tenth.¹⁷

Thus, Muḥammad's instructions to fast on the ninth seem like a counter-instruction to the Talmudic prohibition of fasting on the ninth.

Duration of the Fast

According to Islamic tradition, the Jews of Medina fasted on *yawm 'āshūrā'* from one sunset to the next (*min al-'atama ilā al-'atama*). At the beginning of Islam (*fī awwal al-Islām*), the Muslims followed the Jewish laws in regard to fasting. Later, however, they were permitted to eat and drink before the beginning of the fast at dawn.

Two statements attributed to Muḥammad emphasize the Muslims' desire to differentiate the duration of their fast from that observed by the Medinan Jews. The first was "The difference between our fast and that of the People of the Book is the meal at dawn" (*bayna ṣawminā wa-ṣawm ahl al-kitāb aklat al-ṣaḥar*).¹⁸ Generally, the term "People of the Book" refers to Christians and Jews.¹⁹ In this case, as Goldziher demonstrated it refers specifically to the Jews.²⁰

The second statement is "the religion [i.e., Islam] will continue to prevail as long as the people [i.e., the Muslims] break the fast early, because the Jews and the Christians break it late" (*lā yazālu al-dīn Ḍāhir^{an} mā 'ajjal al-nās al-fīṭr li-anna al-yahūd wa'l-naṣārā yu'ākhirūn*).²¹ The

¹⁴ al-Qushayrī 1955, vol. 2, p. 798 (*ḥadīth* no. 134); Ibn Māja 1952, vol. 1, pp. 552-553.

¹⁵ al-Ṣan'ānī 2000, vol. 4, p. 222 (*ḥadīth* no. 7879); al-Bayhaqī 1925, vol. 4, p. 287.

¹⁶ Ibn Taymiyya 1992, p. 85, 171.

¹⁷ BT, Rosh Ha-Shana, 9a-b; BT, Pesahim, 68b; BT, Yōmā, 81b.

¹⁸ al-Māwardī 1982, vol. 1, p. 196; al-Qushayrī 1955, vol. 2, pp. 770-771 (*ḥadīth* no. 46). Cf. al-Sijistānī, 1952, vol. 1, p. 547; al-Bayhaqī 1991, vol. 4, p. 237; al-Ṣan'ānī 2000, vol. 4, p. 175 (*ḥadīth* no. 7632).

¹⁹ Friedmann 2003, p. 59; McAuliffe 1991, p. 3.

²⁰ Goldziher 1894, pp. 81-82.

²¹ al-Ṣan'ānī 2000, vol. 4, p. 173 (*ḥadīth* no. 7266). Cf. Ibn Māja 1952, vol. 1, pp. 541-542. Cf. al-Bayhaqī 1925, vol. 4, p. 237; al-Sijistānī, 1952, vol. 1, p. 550.

first statement does not necessarily refer to the meal at dawn,²² but rather to the duration of the fast from dawn. The message of these two traditions is that the fast should last from dawn to sunset and no longer.

This is precisely the opposite of the Pentateuch's regulations regarding the duration of the Day of Atonement. Lev. 23:32 states, "It shall be unto you a Sabbath of rest, and ye shall afflict your souls: in the ninth day of the month at evening, *from evening unto evening*, shall ye celebrate your Sabbath."²³

Prohibitions during the Fast:

The Mishna, tractate Yômā cites five prohibitions that apply on the Day of Atonement: eating and drinking, wearing leather, bathing, anointing the body, and having sexual intercourse.²⁴ Originally, Muḥammad forbade the Muslims from having intercourse during the days of the fast after they fell asleep. During one of the nights of Ramaḍān, 'Umar b. al-Khaṭṭāb wanted to have intercourse with his wife. When he approached her, she told him that she was already sleeping, but he thought she was trying to avoid him with false excuses and he had intercourse with her. Afterward, he regretted his action and told Muḥammad. Shortly thereafter Q. 2:187 was revealed:

It is made lawful for you to go in to your wives on the night of the fast. They are apparel for you and you are apparel for them. Allāh knows that you acted unjustly to yourselves, so he turned to you in mercy and removed (the burden) from you. So now be in contact with them and seek what Allāh has ordained for you, and eat and drink until the whiteness of the day becomes distinct from the blackness of the night at dawn, then complete the fast till nightfall, and touch them not while you keep to the mosques. These are the limits of Allāh, so go not near them. Thus does Allāh make clear his messages for men that they may keep their duty.²⁵

One *ḥadīth* states that Muḥammad himself did not avoid intercourse during the nights of Ramaḍān. According to 'Ā'isha bt. Abī Bakr, "The dawn came during Ramaḍān while he (i.e. Muḥammad) was sexually impure and not as a result of nocturnal emission (but from intercourse) and afterward he purified himself and fasted" (*yudrikuhu al-fajr fī Ramaḍān wa-huwa junub^{un} min ghayr ḥulumⁱⁿ fā-yaghtasilu wa-yaṣūmu*).²⁶ This *ḥadīth* also indicates that Muḥammad — indirectly — permitted bathing during the fast even though it is *ghusl*,²⁷ a ritual ablution for the purpose of purification. As mentioned above, Jewish law prohibits bathing on fast days.²⁸

²² According to Islamic law the fast is only in day time. From sunset until sunrise it is permitted to eat and drink. The fast begins again at dawn. We learn that from Q. 2:187: "eat and drink until the whiteness of the day becomes distinct from the blackness of the night at dawn, then complete the fast till nightfall." Translation of the Qur'ān taken from Maulana 1998.

²³ al-Māwardī 1982, vol. 1, p. 196; al-Maḥallī and al-Suyūṭī 2004, p. 43.

²⁴ Mishna, Yômā, 8:1.

²⁵ al-Bayḍāwī 1968, vol. 1, p. 36; al-Māwardī 1982, vol. 1, p. 205. See further Geiger, 1970, p. 158.

²⁶ al-Qushayrī 1955, vol. 2, pp. 793 (*ḥadīth* no. 113-121); al-Bukhārī 1950, vol. 3, p. 40. Cf. al-Dārimī 1966, p. 201 (*ḥadīth* no. 1732); Ibn Abī Shayba 1989, vol. 4, p. 139 (*ḥadīth* no. 7435); al-Bayhaqī 1991, vol. 6, p. 252.

²⁷ On *ghusl* see *EP*, s.v. *Ghusl* (G.H. Bousquet).

²⁸ It is noteworthy that there are some Muslim sages who argue that it is permitted to bathe during the fast, regardless of purification.

'Ā'isha also stated that Muḥammad engaged in light physical contact with her during the fast (*kāna yubāshiru wa-huwa ṣā'im²⁹*),²⁹ and kissed some of his wives (*yuqabbilu ba'd azwājihī wa-huwa ṣā'im³⁰*),³⁰ a behavior prohibited by Jewish law during the fast.

Conclusion

The Islamic attitude to the Jewish *yawm 'āshūrā'* developed in three stages. At first, they adopted it in its Jewish format. Later on, they differentiated themselves from Jewish practices regarding fasting, usually in the direction of more lenient practices. This differentiation was accomplished by changing the date of the fast, the duration of the fast, and the prohibitions during the fast. Finally, they made *yawm 'āshūrā'* optional and replaced it with Ramaḍān, to which all the lenient reforms to *yawm 'āshūrā'* were applied to it.

These differentiations were part of a broader Islamic trend that affected many juridical and legal issues that have not been sufficiently studied thus far.³¹ Some Muslims circles are still quite busy continuing this trend.³² Its purpose was to make Islam unique while avoiding assimilation to other monotheistic traditions, not to mention pagan traditions.³³ One of the reasons it is important to study the subject of differentiation is that it can teach us about the knowledge and interest in the Jews and Judaism by Muslim scholars and may lead us to a reevaluation of their knowledge of these subjects.

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²⁹ al-Qushayrī 1955, vol. 2, pp. 777 (*ḥadīth* no. 67). *Mubāshara* is touching and palpation (*al-lams bi'l-yad*). See Ibid, ibid, n. 2. Cf. Ibn Māja 1952, vol. 1, p. 538.

On *mubāshara* see further Maghen 2005.

³⁰ al-Bayhaqī 1991, vol. 6, p. 276.

³¹ In a forthcoming article of mine I discuss these differentiations in great detail. See Mazuz 2013 b.

³² An internet site called al-Mosaferon has called on its readers to perform a week of differentiation from the Jews (*usbū' mukhālafāt al-yahūd*). See <http://www.almosaferon.com>. On another site, Sheikh Maḥmūd 'Āshūr, *wakīl* al-Azhar, spoke of the need for Muslims today to keep differentiating themselves from the Jews in regard to the length of their beards. See <http://www.dostor.org/politics/egypt/10/january/8/2404>.

³³ On differentiation from pre-Islamic pagan customs, see Kister 1989, pp. 322-324.

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Liturgical texts relating to Sarapamon of Nikiu

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Abstract

This article is an edition of unpublished Coptic liturgical texts relating to Sarapamon of Nikiu. It highlights the importance of the liturgical for Coptic literature. Several texts are here published for the first time.

Introduction

Sarapamon the bishop of Nikiu¹ is one of the great saints of Coptic Egypt. The acts of his martyrdom survive in Coptic.² His martyrdom is commemorated on 28 Hatour and the dedication of the Church of Anba Sarapamon, Bishop of Nikiu, is commemorated on 28 Baounah.³

The Synaxarion records that Sarapamon, who had been ordained bishop of Nikiu by the Alexandrian patriarch Peter I (300–311), was laid to rest in a church in the city after his death.

His relics are preserved in a bolster in the Church of Saint Sarapamon in the village of Al-Batanun near Shibin Al-Kom in the province of Minufiya. Some relics were also kept in the Church of the Virgin Qasriyat Al-Rihan, Old Cairo.⁴ Al-Batanun later became a pilgrimage centre.⁵ The relics of the saint at the Church of the Virgin Qasriyat Al-Rihan have not previously attracted the attention of scholars who studied the church.⁶

The importance of the liturgical texts

Liturgical texts are not in general written at the same place or time; some, such as the *Turuhat*,⁷ are based on a Coptic text. Hence we find many geographical names such as the district of Upper Menuf⁸ and Nikiu;⁹ however, the amalgamation¹⁰ between Nikiu and Menuf in the one text

¹ Timm 1985, pp. 1132–1140.

² Hyvernât 1886, pp. 304–331.

³ Not in Basset 1917, pp. 606 [1145]–606 [1148] or in Forget 1954, pp. 192–194, but only in the edition of al-Mahabâh followed by Atiya 1991, pp. 2171b–2190a.

⁴ Meinardus 1999, p. 320.

⁵ Viaud 1975, p. 32; Meinardus 2002, p. 74.

⁶ Coquin 1974, pp. 139–144.

⁷ For the *Turuhat*, see Burmester 1937a, pp. 78–109; 1937b, pp. 505–549.

⁸ Timm 1985, pp. 1582–1585.

⁹ Timm 1985, pp. 1132–1140.

¹⁰ By ‘amalgamation’ I mean that both cities are the same place and the author uses both names.

reflects a late composition (at least after the Arab conquest if not later). Nikiu remained an episcopal see until the beginning of the eighth century.¹¹ It seems strange that the writer infers that Nikiu is part of Menuf but overlooks the name Ibshadi; which is the Coptic equivalent of Nikiu. Menuf is referred to as a diocese in the manuscript of Scalae, hence providing a snapshot of this city in the Coptic Church in the fourteenth century.¹² The *Tarh* of Sarapamon contains historical data, such as the names of the patriarch Theonas (282–300)¹³ and his successor Peter I (300–311),¹⁴ the seal of the martyrs, and the name of the governor, Arianus.¹⁵

Although the Coptic martyrdom of Sarapamon survives in a manuscript,¹⁶ it is important to mention that the beginning of the text is lost, so the text of the *Turuhat* completes our knowledge, providing more detail than the brief account of the Synaxarium.

The psalis, doxologies and other hymns, on the other hand, do not provide any historical or geographical data. They mainly praise the virtues of the saint and his courage; however, they have liturgical significance. They quote from the psalms used in the feast of the saint and they also clearly demonstrate that there was (there still is) a pilgrimage centre around the relics of the saint, implied by the words “Come, assemble you faithful... *etc.*” “Let us celebrate the feast of...”¹⁷

The Manuscript

The manuscript Lit 10 office of Sarapamon¹⁸ is dated 11 Misra 1452 AM (= 16 August 1736). This manuscript reflects that the relics of Sarapamon were already at the church of Qasriyat al-Rihan at that date, nearly half a century before the church’s reconstruction and restoration by its overseer, Salib ‘Abd al-Masih, who provided funds for the work, which involved fortifying its walls, beautifying the church and decorating its pulpits. This work was completed in the year 1178.¹⁹ This manuscript is considered unique.²⁰

The psalis below was written for the Church of Qasriyat al-Rihan. Hence we find the name of the Virgin Mary appearing often in the psali, as the church is named after her. The author of this psalis is Nicodemus, who authored many psalis.²¹

We will provide here the texts in the manuscript and compare the editions of the books:

¹¹ Fedalto 1984, pp. 249–323, especially pp. 260–261.

¹² Munier 1943, p. 47.

¹³ Atiya 1991, pp. 2244–2247.

¹⁴ Spanel 1991, pp. 1943–1947.

¹⁵ Vandersleyen 1962, pp. 86–90.

¹⁶ Hyvernât 1886, pp. 304–331.

¹⁷ Meinardus 2002, p. 74 mentions: “Since 1980 some relics of Saint Sarapamon have been venerated in the new church of the Holy Virgin Qasriyat al-Rihan in Old Cairo.” Our manuscript demonstrates that this veneration began at least 300 years earlier.

¹⁸ Simaika and ‘Abd al-Masih 1937, Nr 223; Graf 1934, Nr 27.

¹⁹ Khater and Burmester 1977, p. VII.

²⁰ Graf 1944, p. 310.

²¹ Youhanna Nessim Youssef 1998, pp. 383–402; 1994, pp. 625–633.

نبتدي بعون الله تعالى وحسن ارشاده بكتب ما يجب قراته ليلة عيد
القديس صرابامون من الابصاليات والدكصولوجيات والطرورات
والمردرات والقانون بركة قائلهم تكون معنا وتحرسنا الي النفس الاخير

واول ذلك ابصالية واطس للشهيد صرابامون

αμωινι τηρου ω νιλαος: ἡμῶν ἰη̅ς
π̅χ̅: ἡν̅τεν̅τ̅ωου̅ ν̅τ̅πα̅²² * nem
σαραπαμον πιεπισκοπος
von niven euraui mfoou: nem pxwros
ἡν̅τε̅ νιμαρτυρος: ε̅βε̅ πι̅νι̅ω̅τ̅ ἡ̅ν̅τα̅ιο̅:
ἡ̅ν̅τε̅²³ σεραπαμον²⁴ πιεπισκοπος
ge gar ἡ̅θο̅q̅ πι̅γεν̅νε̅ος̅: α̅ρ̅ω̅ε̅π̅δ̅ι̅ς̅ι̅
ἡ̅ν̅ν̅ι̅β̅α̅ς̅α̅ν̅ος̅: ο̅γ̅ο̅ζ̅ α̅ρ̅μ̅ο̅υ̅ ἡ̅ν̅ τ̅χ̅η̅q̅
ε̅βε̅ π̅χ̅: ἡ̅ν̅τ̅ω̅ε̅β̅ι̅ο̅ ἡ̅μ̅ε̅ρ̅α̅λ̅α̅ος̅ *
δαυ̅ι̅δ̅ πι̅ρ̅υ̅μ̅ν̅ο̅τ̅ος̅ α̅ρ̅χ̅ος̅: ἡ̅ν̅ π̅χ̅ω̅μ̅
ἡ̅μ̅ε̅ρ̅ψ̅α̅λ̅λ̅μ̅ος̅: χ̅ε̅ ν̅ι̅ο̅μ̅ν̅ι̅ ω̅ψ̅ ε̅β̅ο̅λ̅ζ̅α̅ π̅δ̅ς̅:
σω̅τ̅ε̅μ̅ ε̅ρ̅ω̅ου̅ ἡ̅ν̅ νο̅υ̅δ̅ι̅ω̅γ̅μ̅ος̅
ε̅τ̅ε̅ φ̅α̅ι̅ π̅ε̅ π̅ι̅α̅λ̅ο̅φ̅ο̅ρ̅ο̅[ς̅: π̅ι̅μ̅α̅ρ̅τ̅υ̅ρ̅ος̅:
πι̅γεν̅νε̅ος̅: π̅ι̅μ̅ε̅ν̅ρ̅ι̅τ̅ ἡ̅ν̅τε̅ π̅χ̅: α̅β̅β̅α̅
σαραπαμων πιεπισκοπος
zeou ne²⁶ ν̅ι̅ω̅φ̅η̅ρ̅ι̅: ν̅η̅ε̅τ̅α̅q̅ι̅ρ̅ι̅ ἡ̅ν̅ π̅χ̅:
πι̅γεν̅νε̅ος̅ π̅ι̅ε̅ π̅ι̅χ̅ω̅ρ̅ι̅: * α̅β̅β̅α̅
σεραπαμον²⁷ πιεπισκοπος
η̅δε̅ος̅ α̅ρ̅β̅ι̅ς̅ι̅ ε̅μ̅α̅ψ̅ω̅: ἡ̅ν̅ ο̅μ̅η̅τ̅ ἡ̅ν̅ν̅ι̅μ̅:
π̅ι̅ς̅τ̅υ̅λ̅λ̅ος̅ π̅ι̅μ̅α̅ν̅ε̅ς̅ω̅ου̅: α̅β̅β̅α̅
σεραπαμον²⁸ πιεπισκοπος
θ̅ω̅ου̅τ̅ ω̅ ν̅ι̅χ̅ρ̅ι̅ς̅τ̅ι̅α̅ν̅ος̅: ν̅ε̅ν̅ψ̅η̅ρ̅ι̅
ἡ̅ν̅τ̅ε̅κ̅κ̅λ̅η̅ς̅ια̅: ἡ̅ν̅τ̅ε̅ν̅ε̅ρ̅ω̅α̅ι̅ ἡ̅ν̅
ζ̅α̅ν̅ψ̅α̅λ̅λ̅μ̅ος̅: ε̅βε̅ π̅ε̅ν̅ι̅ω̅τ̅ φ̅α̅ τ̅ς̅ο̅φ̅ι̅α̅
ι̅ς̅ ν̅ε̅ν̅ι̅ο̅τ̅ ἡ̅ν̅α̅π̅ο̅ς̅τ̅ο̅λ̅ος̅ ε̅ψ̅ω̅ου̅ψ̅ου̅ ε̅βε̅
νε̅κ̅β̅α̅²⁹ * α̅ν̅ος̅ nem τε̅κα̅γα̅π̅η̅ ἡ̅ν̅ π̅χ̅
ἡ̅ν̅τε̅ π̅ι̅ν̅ι̅ω̅τ̅ α̅β̅β̅α̅ σεραπαμον²⁹
κ̅ς̅ ἡ̅ν̅ π̅χ̅ ἡ̅ν̅τε̅ν̅μ̅η̅τ̅ nem νε̅q̅α̅ρ̅γ̅ε̅λ̅ος̅
ε̅ο̅γ̅α̅β̅ ἡ̅ν̅τα̅ιο̅³⁰ ἡ̅μ̅πι̅γεν̅νε̅ος̅
σεραπαμων³¹ π̅ι̅μ̅

We begin with the help of God, let Him be exalted, and His good consent to write what should be read in the vigil of the feast of Saint Sarapamon from the psalis, doxologies, *Turuhat*, responses, and the canon. May the blessing of the utterer be with us and preserve us to the last breath.

The commencement of that is the Psali Batos of the martyr Sarapamon²²

Come all *people*, loving God Jesus Christ in order to glorify the *Virgin* and Sarapamon the *bishop*

Everybody rejoice today with the *choirs* of the *martyrs* because of the great honour of Sarapamon the *bishop*

For he is *brave*, he suffered *tortures* and died with the sword because of *Christ* instead of his *congregation*

David the *psalmist* said in the book of *psalms*:

The just cried out and the Lord heard them in their *persecutions*²⁵

Who is this brave *athletic martyr* the beloved of *Christ* Abba Sarapamon the *bishop*

Numerous are the wonders that you performed through *Christ*, the *brave* mighty saint, Abba Sarapamon the *bishop*

He is *pleasantly* exalted among the *martyrs*, the *pillar*, the shepherd, Abba Sarapamon the *bishop*

Assemble O *Christians*, the sons of the *Church*, in order to celebrate the feast with *psalms* for our father who has *wisdom*

Behold our fathers the *Apostles* are proud of your *tortures* and your *love* in *Christ*, great Abba Sarapamon

Lord Jesus Christ is in our midst with His holy *angels* glorifying the *brave* Sarapamon the *martyr*

²² Filotheus al-Maqari and Mikhail Girgis 1913, pp. 241–247 (hereafter Kitab al-Absalyiat).

²³ Kitab al-Absalyiat, omit.

²⁴ Kitab al-Absalyiat, σεραπαμων.

²⁵ Ps. 33 (34): 17–18.

²⁶ This part is missing in the manuscript due to restoration. The text here is from the Kitab al-Absalyiat.

²⁷ Kitab al-Absalyiat σεραπαμων.

²⁸ Kitab al-Absalyiat σεραπαμων.

²⁹ Kitab al-Absalyiat σεραπαμων.

³⁰ Kitab al-Absalyiat εϋτ̅α̅ιο̅.

³¹ Kitab al-Absalyiat σεραπαμων.

ΛΑΛΙ ΞΕΝ ΟΥΜΣΜΗ `ΝΘΕΛΗΛ Ω ΝΙΘΜΗ ΝΕΜ
 ΝΙΔΕΟΝ³² ΧΩ ΝΑΝ ΕΒΟΛ Ω ΕΜΜΑΝΟΥΗΛ ΕΘΒΕ
 ΠΕΝΙΩΤ ΣΕΡΑΠΑΜΟΝ³³
 ΜΟΙ ΝΑΝ ΠΒ̄C ΝΤΕΚΖΙΡΗΝΗ ΨΑ ΠΧΩΚ ΕΒΟΛ
 ΝΝΙΕΩΝ ΟΥΟΖ ΜΑΤΑΛΒΟ Ν*ΝΕΝΨΩΝΙ ΕΘΒΕ
 ΠΕΝΙΩΤ ΣΕΡΑΠΑΜΟΝ³⁴
 ΝΑΙ ΝΑΝ ΟΥΟΖ ΣΩΤΕΜ ΕΡΟΝ ΩΛΙ ΜΠΕΚΧΩΝΤ
 ΕΒΟΛ ΖΑΡΟΝ ΕΘΒΕ ΝΙΤΖΟΥ³⁵ ΕΖΡΗΙ ΕΧΟΝ³⁶
 ΠΕΝΙΩΤ³⁷ ΠΙΝΙΩΤ ΣΕΡΑΠΑΜΟΝ³⁸
 ΞΣΜΑΡΩΟΥΤ Ω ΠΑΤΗΡ ΗΜΩΝ ΞΣΜΑΡΩΟΥΤ
 Π̄ΝΑ ΝΑΓΙΟΝ ΝΑΖΜΕΝ ΕΒΟΛ ΖΑΝΔΕΜΟΝ
³⁹ΠΕΝΙΩΤ ΑΒΒΑ ΣΕΡΑΠΑΜΟΝ⁴⁰
 ΟΥΝΙΩΤ ΓΑΡ ΠΕ ΠΕΚΤΑΙΟ:* Ω ΠΕΝΙΩΤ
 `ΝΑΠΙΣΚΟΠΟΣ:⁴¹ ΠΙΜΑΝΕΣΩΟΥ ΠΙΡΕΦΒΡΟ:
 ΑΒΒΑ ΣΕΡΑΠΑΜΟΝ⁴² ΠΙϠ
 ΠΕΝΝΗΒ ΧΩΡ ΕΒΟΛ ΝΝΙΧΑΧΙ `ΝΤΕ
 ΨΕΚΚΛΗCΙΑ Ω ΠΧ̄C ΟΥΟΖ ΧΩΡ ΕΒΟΛ
 `ΜΠΟCΟΒΝΙ⁴³ ΕΘΖΩΟΥ Ω ΠΙΑΓΑΘΟC
 ΡΩΙC ΕΡΟΝ Ω ΕΜΜΑΝΟΥΗΛ ΞΕΝ ΠΙΡΑCΜΟC⁴⁴
 Ω ΙΗ̄C ΠΧ̄C ΕΘΒΕ ΝΙΤΖΟΥ⁴⁵ ΝΕΜ ΝΙΨΛΗΛ ΑΒΒΑ
 ΣΕΡΑΠΑΜΟΝ ΠΙΕΠΙCΚΟΠΟC^{46*}
 CΜΟΥ `ΜΦΙΕΡΩΟΥ⁴⁷ ΝΕΜ ΝΙCΙΤ ΝΕΜ
 ΝΙΚΑΡΠΟC ΕΘΒΕ ΠΕΝΙΩΤ ΠΙΜΑΝΕCΩΟΥ
 ΣΕΡΑΠΑΜΟΝ⁴⁸ ΠΙΕΠΙCΚΟΠΟC
 ΤΕΝΤΖΟ ΕΡΟΚ ΕΘΒΕ ΝΙΟΥΗΒ ΝΕΜ
 ΝΙΔΙΑΚΟΝ⁴⁹ ΝΕΜ ΝΙΛΑΙΚΟC ΝΑΖΜΟΥ ΕΘΒΕ
 ΤΕΝΒ̄C ΝΝΗΒ ΜΑΡΙΑ ΨΘΕΟΤΟΚΟC
 ῩC Θ̄C ΑΡΕΖ ΕΡΟΝ ΕΒΟΛΖΑ ΠΙΦΑΨ ΝΤΕ
 ΝΙΔΕΜΩΝ ΕΘΒΕ ΠΕΝΙΩΤ ΠΙΜΑΝΕCΩΟΥ
 ΣΕΡΑΠΑΜΟΝ⁵⁰

Sing with a joyful voice, O righteous with the *just*. Forgive us O Emmanuel, for the sake of our father Sarapamon

Grant us Lord your *peace* till the end of *ages*, heal our sick, for the sake of our father Sarapamon

Have mercy upon us and hear us. Take away Your anger from us, for the sake of our father the great Sarapamon who intercedes on our behalf. Blessed are You, *O our Father*. Blessed are You, *Holy Spirit*. Deliver us from *devils*, for the sake of our father Sarapamon

For great is your honour, O our father the *bishop*, the victorious shepherd Abba Sarapamon the *martyr*

Our Lord, disperse the enemies of the *Church*, O *Christ*. And disperse their evil counsel, O *Good One*

Keep us, O Emmanuel from *temptations*, O *Jesus Christ* for the beseeching and the prayers of Abba Sarapamon the *bishop*

Bless the (waters) of the river(s), the plants and the *fruits*, for the sake of our father the shepherd Sarapamon the *bishop*

We beseech you to deliver the priests, *deacons* and the *laymen*, for the sake of our Lady, Mary the *God-Bearer*

Son of God preserve us from the snares of the *devils*, for the sake of our father the shepherd Sarapamon

³² Kitab al-Absalyiat ΝΙΔΙΚΕΟΝ.

³³ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

³⁴ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

³⁵ Kitab al-Absalyiat ΝΙΤΖΟ.

³⁶ Kitab al-Absalyiat ΕΧΩΝ.

³⁷ Kitab al-Absalyiat `ΜΠΕΝΙΩΤ.

³⁸ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

³⁹ Kitab al-Absalyiat adds ΕΘΒΕ.

⁴⁰ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁴¹ Kitab al-Absalyiat `ΝΕΠΙCΚΟΠΟC.

⁴² Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁴³ Kitab al-Absalyiat `ΜΠΟΥCΟΒΝΙ.

⁴⁴ Kitab al-Absalyiat ΝΙΠΙΡΑCΜΟC.

⁴⁵ Kitab al-Absalyiat ΝΙΤΖΟ.

⁴⁶ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁴⁷ Kitab al-Absalyiat ΝΙΜΩΟΥ `ΜΦΙΑΡΟ.

⁴⁸ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁴⁹ Kitab al-Absalyiat ΝΙΔΙΑΚΩΝ.

⁵⁰ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

ΦΗΝΒ Φ† ΠΕΝΒΟΗΘΟΣ ΒΙCΙ* ΜΠΤΑΠ
 ΝΝΙΧΡΙCΤΙΑΝΟΣ ΕΘΒΕ †ΜΑΡΤΥΡΟΣ ΝΕΜ
 †ΠΑΡΘΕΝΟΣ⁵¹ ΝΕΜ CΕΡΑΠΑΜΟΝ⁵²
 ΠΙΕΠΙCΚΟΠΟΣ
 ΧΕΡΕ ΝΕ Ω †ΠΑΡΘΕΝΟΣ ΜΑΡΙΑ †ΒΡΟΜΠΙ
 ΕΘΝΕCΟC ΧΕΡΕ ΝΕΚ⁵⁴ Ω ΠΙ† CΕΡΑΠΑΜΟΝ
 ΠΙΕΠΙCΚΟΠΟΣ
 ΨΥΧΗ ΝΙΒΕΝ ΜΟΙ ΝΩΟΥ ΝΟΥΧΒΟΒ ΞΕΝ ΚΕΝQ
 †ΝΝΕΝΙΟ† ΝΔΙΚΕΟC ΑΒΡΑΑΜ ΙCΑΑΚ ΙΑΚΩΒ⁵⁵
 CΕΡΑΠΑΜΟΝ⁵⁶ ΠΙΕΠΙCΚΟΠΟΣ *
 ΩΟΥΝΖΗ†⁵⁷ ΑΡΙΠΑΜΕΥΙ ΑΝΟΚ ΠΙΚΕΡΜΙ
 ΝΗΚΟΥΔΟΜΟC⁵⁸ ΟΥΟZ ΧΩ ΝΑΝ⁵⁹ ΕΒΟΛ
 †ΝΝΑΝΝΟΒΙ ΝΕΜ ΠCΕΠΙ †ΝΝΙΧΡΙCΤΙΑΝΟC
 ΕΩΩΠ ΑΝΩΑΝ

ابصالي ادام للشهيد العظيم سرايامون

ΑΡΕZ ΕΡΟΙ ΠΑΝΟΥ† ΕΒΟΛΖΑ ΝΙΔΕΜΩΝ ΕΘΒΕ
 †ΜΑCΝΟΥ† ΝΕΜ ΠΙΕΘΥ CΕΡΑΠΑΜΩΝ⁶⁰
 ΒΟΝ ΝΙΒΕΝ CΕΤΑΙΟ ΠΙΝΙΩ†⁶¹ †ΝΑΓΩΝ †ΝΤΕ
 ΠΕΝΙΩ† ΠΙΜΑΝΕCΩΟΥ ΠΙΕΘΥ CΕΡΑΠΑΜΩΝ⁶²
 ΓΕ ΓΑΡ †ΝΘΟQ ΑQΒΙCΙ †ΝΧΕ ΠΕΝΙΩ†
 ΠΙΔΙΚΕΟΝ⁶³ ΠΑ⁶⁴ ΠΙCΩΙ† ΕΤΒΟCΙ ΦΗΕΘΥ
 CΑΡΑΠΑΜΩΝ⁶⁵
 ΔΑΥΙΔ ΑQΧΩ⁶⁶ ΕΠΤΑΙΟ⁶⁷ ΞΕΝ ΠΕQΟΡΓΑΝΟΝ
 ΕΘΒΕ ΠΙΡΕQΒΡΟ ΦΗΕΘΥ CΕΡΑΠΑΜΩΝ⁶⁸
 ΕΛΕΝCΟΝ ΗΜΑC Ω CΩΤΗΡ ΗΜΩΝ ΕΘΒΕ
 ΤΕΚΜΑΥ ΜΑΡΙΑC ΝΕΜ ΦΗΕΘΥ CΕΡΑΠΑΜΩΝ⁶⁹
 Ξ †ΝΤΑΓΜΑ ΝΙΒΕΝ †ΝΤΕ †ΕΚΚΛΗCΙΑ ΕΥΤΑΙΟ
 †ΝCΗΟΥ ΝΙΒΕΝ †ΜΠΕΝΙΩ† ΦΑ †CΟΦΙΑ
 ΗΠΠΕ ΠΕΝΙΩ† ΠΙΝΙΩ† ΑQ†ΩΙΠΙ †ΝΝΙΑΝΟΜΟC
 ΞΕΝ ΤΧΟΜ ΜΠΧC ΠΕΝΝΟΥ† ΠΕΝCΩΤΗΡ ΙΗC

Lord, God, our *helper*, exalt the horn⁵³ of the
Christians, for the sake of the *martyr(s)* and the
Virgin and Sarapamon the *bishop*

Hail to you O *Virgin Mary*, the beautiful dove.
Hail to you O *martyr* Sarapamon the *bishop*

All *souls* give them rest in the bosom of our
righteous fathers Abraham, Isaac and Jacob, for
 the sake of Sarapamon the *bishop*
 Be patient, and remember me the dust Nicodemus
 and forgive me my sins together with all the rest
 of the *Christians*

Psali Adam for the great martyr Sarapamon

Preserve me my God from the *devils* for the sake
 of the God-Bearer with saint Sarapamon
 Everybody honour the great *struggle* of our
 father, the shepherd, saint Sarapamon
 For our *righteous* father, who has the sublime
 fame, saint Sarapamon, is elevated

David talked with his *organon* about the honour
 of the victorious saint Sarapamon
Have mercy upon us, O our Saviour, for the sake
 of Your mother Mary and saint Sarapamon
 The whole seven *ranks* of the *Church* always
 honour our father who has *wisdom*
 Behold our great father, put in shame the *lawless*
 with the power of *Christ* our God and our
Saviour Jesus

⁵¹ Kitab al-Absalyiat †ΠΑΡΘΕΝΟΣ ΝΕΜ ΝΙΜΑΡΤΥΡΟΣ.

⁵² Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁵³ 1 Sam 2:1.

⁵⁴ Kitab al-Absalyiat ΝΑΚ.

⁵⁵ Kitab al-Absalyiat adds ΕΘΒΕ.

⁵⁶ Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁵⁷ Kitab al-Absalyiat: O Patient" Ω ΠΙΡΕQΩΟΥΝΖΗ†.

⁵⁸ Kitab al-Absalyiat ΝΙΚΟΥΔΕΜΟC.

⁵⁹ Kitab al-Absalyiat ΝΗΙ.

⁶⁰ Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁶¹ Kitab al-Absalyiat ΝΙΝΙΩ†.

⁶² Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁶³ Kitab al-Absalyiat ΠΙΔΥΚΕΟΝ.

⁶⁴ Kitab al-Absalyiat ΦΑ.

⁶⁵ Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁶⁶ Kitab al-Absalyiat ΕQΧΩ.

⁶⁷ Kitab al-Absalyiat ΕΟΥΤΑΙΟ.

⁶⁸ Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

⁶⁹ Kitab al-Absalyiat CΑΡΑΠΑΜΩΝ.

ΘΩΟΥ† Ω ΝΙΠΙΣΤΟΣ ΝΙΛΑΟΣ ᾠΜΑΙΝΟΥ†
 ᾠΝΤΑΙΟ⁷⁰ ΚΑΛΩΣ ΣΕΡΑΠΑΜΟΝ ΠΙΝΙΩ†⁷¹
 ΙΣ ΝΙΑΠΟΣΤΟΛΟΣ ΝΕΜ ΝΙΑΙΚΕΟΣ ΦΗΘ
 ΣΕΡΑΠΑΜΟΝ ΕΥΤΑΙΟ⁷² ΜΠΙΔΙΚΕΟΣ⁷³
 ΚΕ ΠΑΛΙΝ ΠΧΩΡΟΣ ᾠΝΤΕ ΝΙΜΑΡΤΥΡΟΣ ΞΕΝ
 ΤΕΝΜΗ† ΔΕΟΝ ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ⁷⁴
 ΛΑΛΙ ΟΥ⁷⁵ ΝΙΩΗΡΙ ᾠΝΤΕ †ΕΚΚΛΗΣΙΑ ΕΘΒΕ
 ΠΩΟΥΩΟΥ ΝΝΙΖΙΟΜΙ †ΑΓΙΑ ΜΑΡΙΑ
 ΜΟΙ ΝΑΝ ΝΤΕΚΖΙΡΗΝΗ ΨΑ ΠΧΩΚ ΝΝΙΕΩΝ
 ΜΑΤΑΛΒΟ ΝΝΕΝΩΩΝΙ ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ⁷⁶
 ΝΑΙ ΝΑΝ ΣΩΤΕΜ ΕΡΟΝ Ω ΠΙΛΟΓΟΣ ΝΤΕ
 ΦΙΩΤ* ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ⁷⁷ ΠΕΝΙΩΤ
 ΦΗΕΤΣΜΑΡΩΟΥ†
 ΞΜΑΡΩΟΥ† ΑΛΗΘΩΣ Ω ΠΑΤΗΡ ΗΜΩΝ ΝΕΜ
 ΠΕΚΩΗΡΙ ΙΗΣ ΠΧΣ ΝΕΜ ΠΕΚΠΝΑ ΝΑΓΙΟΝ
 ΟΥΩΟΥ ΝΑΚ Φ† ΨΑ †ΣΙΝΤΕΛΙΑ⁷⁸
 ΜΑΡΑΝΧΟΣ⁷⁹ ΜΦΑΙΡΗ†⁸⁰ ΧΕ ΧΕΡΕ ΝΕ ΜΑΡΙΑ
 ΠΕΝΝΗΒ ΧΩΡ ΕΒΟΛ ᾠΝΝΙΧΑΧΙ ᾠΝΤΕ
 †ΕΚΚΛΗΣΙΑ ΜΑΘΕΒΙΟ ΜΠΟΥΣΟΒΝΙ ΝΕΜ
 ΝΟΥΚΑΤΑΛΑΛΙΑ
 ΡΩΙΣ ΕΡΟΝ Ω ΠΧΣ ΕΒΟΛ*ΖΑ ΝΙΔΕΜΩΝ ΝΕΜ
 ΝΙΧΡΟΨ ΝΕΜ ΝΙΦΘΟΝΟΣ ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ⁸¹
 ΣΜΟΥ ΕΝΙΑΡΩΟΥ ΝΕΜ ΝΙΣΙ† ΝΕΜ ΝΙΚΑΡΠΟΣ
 ΕΘΒΕ ΠΙΜΑΝΕΣΩΟΥ ΣΕΡΑΠΑΜΩΝ
 ΠΙΜΑΡΤΥΡΟΣ⁸²
 ΤΕΝ†ΖΟ ΕΘΒΕ ΝΙΟΥΗΒ ΝΕΜ ΝΙΑΔΙΑΚΩΝ
 ΝΑΖΜΟΥ Ω ΠΧΣ ΠΕΝΝΗΒ ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ⁸³
 ΥΣ ΘΣ ΠΕΝΝΟΥ† ΑΡΕΖ ΕΠΕΚΛΑΟΣ ΕΒΟΛΖΑ
 ΟΥΖΟ†⁸⁴ ΕΘΒΕ †ΠΑΡΘΕΝΟΣ*
 Φ† ΠΙΜΑΙΡΩΜΙ ΕΘΒΕ ΣΕΡΑΠΑΜΩΝ ΧΩ ΝΑΝ
 ΕΒΟΛ ΝΝΕΝΝΟΒΙ ΕΘΒΕ ΠΕΚΡΑΝ ΜΑΤΑΧΡΟΝ

Assemble O *faithful peoples* loving God in order
 to *duly* honour the great Sarapamon
 Lo, the *Apostles* and the *righteous ones* honour
 the righteous Sarapamon
 And also the *choirs* of the *martyrs* in our midst
 also [honour] Sarapamon
 Sing O children of the *church* for the pride of
 women *who is saint Mary*
 Grant us Your *peace* till the end of *ages*. Heal our
 sickness for the sake of Sarapamon
 Have mercy upon us, listen to us, O *Word* of the
 Father, for the sake of our blessed father
 Sarapamon
 Truly, You are blessed O *Our Father* and Your
 Son *Jesus Christ* and the *Holy Spirit*
 Glory be to You, O God till the *end [of ages]*, let
 us say thus: *Hail* to you *Mary*
 Our Lord disperse the enemies of the *Church*,
 humiliate their counsel and their *slanders*

Keep us, O *Christ* from the guile and the *envy* of
 the devils for the sake of Sarapamon
 Bless the rivers and the plants and the *fruits* for
 the sake of the shepherd Sarapamon the *martyr*

We beseech You deliver the priests and the
deacons O *Christ* our Lord for the sake of
 Sarapamon
 Son of God our God preserve Your *people* from
 fear for the sake of the *Virgin*
 God the Lover of mankind, for the sake of
 Sarapamon, forgive us our sins. For Your name's
 sake, strengthen us

⁷⁰ Read ΝΤΕΝΤΑΙΟ.

⁷¹ Kitab al-Absalyiat ΘΩΟΥ† ΤΗΡΟΥ ΝΕΜΗΙ Ω ΠΙΧΡΙΣΤΙΑΝΟΣ ΝΤΕΝΤΑΙΟ ΜΠΑΙΑΝΑΜΗ ΣΑΡΑΠΑΜΩΝ ΠΙΕΠΙΣΚΟΠΟΣ: Assemble all *Christians* with me in order to honour precious stone Sarapamon the *Bishop*.

⁷² The writer of the text did not respect the grammatical rules. Read ΕΥΤΑΙΟ ᾠΜΠΙΔΙΚΕΟΣ ΣΑΡΑΠΑΜΟΝ.

⁷³ Kitab al-Absalyiat ΙΣ ΝΙΑΠΟΣΤΟΛΟΣ ΝΕΜ ΝΙΑΙΚΕΟΝ ΕΥΤΑΙΟ ΜΠΙΔΙΚΕΟΣ ΣΑΡΑΠΑΜΩΝ: Lo, the *Apostles* and the *righteous* honour the *bishop* saint Sarapamon.

⁷⁴ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁷⁵ Kitab al-Absalyiat Ω.

⁷⁶ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁷⁷ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁷⁸ Kitab al-Absalyiat ΣΥΝΤΕΛΙΑ.

⁷⁹ Kitab al-Absalyiat ΜΑΡΕΝΧΟΣ.

⁸⁰ Kitab al-Absalyiat ΜΠΑΙΡΗ†.

⁸¹ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ. ΠΙΕΠΙΣΚΟΠΟΣ is added by another hand in the manuscript.

⁸² Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ ΠΙΕΠΙΣΚΟΠΟΣ: "Sarapamon the *bishop*".

⁸³ Kitab al-Absalyiat ΣΑΡΑΠΑΜΩΝ.

⁸⁴ Kitab al-Absalyiat ΝΙ†ΖΟ.

χερε θμαγ μπ̄χ̄ς πογρο ννῑων χερε
 πιμαρ̄τρος⁸⁵ πῑε̄θ̄ϋ̄ σεραπαμων⁸⁶
 ψ̄γ̄χη̄ μᾱε̄μ̄τον̄ ν̄ω̄οῡ ν̄ε̄μ̄ ν̄ῑδῑκε̄ον̄ ε̄ο̄βε̄
 τεκ̄μᾱγ̄ τ̄ο̄γ̄ρω̄ ν̄ε̄μ̄ πῑε̄θ̄ σεραπαμων⁸⁷

ω̄ πε̄ν̄ν̄η̄β̄ ᾱρῑφ̄με̄γ̄ῑ μ̄πε̄κ̄β̄ω̄κ̄ ν̄ῑκο̄ῡδ̄ῑμο̄ς*
 χ̄ω̄ ν̄ᾱq̄ ε̄βο̄λ̄ ν̄νε̄q̄νο̄β̄ῑ ν̄ε̄μ̄ π̄σε̄π̄ῑ
 μ̄πε̄κ̄λ̄ᾱο̄ς
 λ̄ο̄ῑπο̄ν̄ ᾱν̄ω̄ᾱν̄θ̄ω̄ο̄γ̄†

الحن البرلكس مكتوب في اخر الكراس
 دكصولجية واطس لماري سراپامون

θ̄ω̄ο̄γ̄†̄ τη̄ρο̄γ̄ ω̄ ν̄ῑλᾱο̄ς̄ μ̄μ̄αῑνο̄γ̄†̄ ῑη̄ς̄ π̄χ̄ς̄
 ᾠ̄ν̄τε̄ν̄τᾱιο̄ ᾠ̄μ̄π̄αῑμᾱρ̄τ̄ῡρο̄ς̄ σε̄ρᾱπᾱμο̄ν̄
 πῑε̄πῑσκο̄πο̄ς̄
 ῑη̄ς̄ π̄χ̄ς̄ ᾱq̄σω̄τ̄π̄ ν̄ᾱq̄ ε̄ο̄ρε̄q̄ᾱμο̄ν̄ῑ
 ᾠ̄μ̄πε̄q̄λᾱο̄ς̄ ο̄γ̄ο̄z̄ ᾱq̄ερ̄φο̄ρῑν̄ ᾠ̄μ̄πῑχ̄λω̄μ̄
 νᾱτ̄λω̄μ̄ ν̄τε̄ τ̄με̄τ̄μᾱρ̄τ̄ῡρο̄ς̄
 ω̄ν̄ιᾱτ̄κ̄⁸⁸ ω̄ πε̄ν̄ῑω̄τ̄ πῑν̄ῑω̄†̄ σε̄ρᾱπᾱμο̄ν̄
 πῑε̄πῑσκο̄πο̄ς̄ πῑμᾱνε̄ς̄ω̄ο̄γ̄ πῑμ̄ε̄ν̄ρῑτ̄
 ν̄τε̄ ῑη̄ς̄ π̄χ̄ς̄
 χερε νακ ω̄ πιμαρ̄τ̄ῡρο̄ς̄ σεραπαμων
 πῑε̄πῑσκο̄πο̄ς̄ φ̄νε̄τ̄χο̄λ̄⁸⁹ μ̄πῑο̄γ̄ω̄ν̄ῑ
 ν̄τ̄γ̄ᾱτο̄χο̄ς̄⁹⁰ ν̄ν̄ιᾱπο̄στο̄λο̄ς̄
 χερε νακ ω̄ πῑστ̄γ̄λλ̄ο̄ς̄ φ̄νε̄τε̄ρο̄γ̄ω̄ν̄ῑ
 ϋ̄ε̄ν̄ πῑκο̄ς̄μο̄ς̄ φ̄νε̄τᾱq̄φο̄ν̄ μ̄πῑς̄νο̄q̄ ε̄βο̄λ̄
 ε̄ο̄βε̄ *φ̄ρᾱν̄ ᾠ̄ν̄ῑη̄ς̄ π̄χ̄ς̄
 τ̄ω̄β̄z̄ π̄δ̄ς̄ ε̄z̄ρη̄ῑ ε̄χ̄ω̄ν̄ ν̄ιᾱτ̄λο̄φο̄ρο̄ς̄ μ̄μ̄
 σεραπαμων πῑε̄πῑσκο̄πο̄ς̄

دكصولجية ادام للشهيد سراپامون

μᾱρε̄ν̄θ̄ω̄ο̄γ̄†̄ τη̄ρε̄ν̄ ω̄ ν̄ιο̄ρ̄θ̄ο̄ᾱο̄ς̄ z̄ῑνᾱ
 ν̄τε̄ν̄†̄ω̄ο̄γ̄ μ̄π̄νε̄ν̄δ̄ς̄ ῑη̄ς̄ π̄χ̄ς̄
 ο̄γ̄ο̄z̄ ᾠ̄ν̄τε̄ν̄τᾱιο̄ μ̄π̄ε̄ν̄*̄ῑω̄τ̄ ᾠ̄νε̄πῑσκο̄πο̄ς̄
 ᾱβ̄βᾱ σε̄ρᾱπᾱμο̄ν̄ πῑς̄ω̄τ̄π̄ μ̄μᾱρ̄τ̄ῡρο̄ς̄
 ο̄γ̄ο̄z̄ ν̄τε̄ν̄ω̄ω̄ ε̄βο̄λ̄ ϋ̄ε̄ν̄ ο̄γ̄ς̄μ̄η̄ ν̄ε̄ε̄λη̄
 χ̄ε̄ χερε νακ πιμαρ̄τ̄ῡρο̄ς̄ πῑν̄ῑω̄†̄
 σεραπαμων
 χερε πῑστ̄γ̄λλ̄ο̄ς̄ χερε πῑμᾱνε̄ς̄ω̄ο̄γ̄ χερε
 π̄ῑ*̄ε̄πῑσκο̄πο̄ς̄ πῑε̄θ̄ σεραπαμων
 χερε πῑε̄τᾱq̄ερ̄φο̄ρῑν̄ ν̄ν̄ῑχ̄λω̄μ̄ νᾱτ̄λω̄μ̄
 ε̄ο̄βε̄ τε̄q̄με̄ν̄τε̄q̄ε̄πῑσκο̄πο̄ς̄ ν̄ε̄μ̄
 τε̄q̄ο̄μο̄λο̄γ̄ιᾱ

*Hail to the mother of Christ the King of the ages:
 Hail to the martyr saint Sarapamon
 Repose the souls with the righteous one for the
 sake of Your mother the Queen and saint
 Sarapamon
 O our Lord, remember your servant Nicodemus,
 forgive his sins together with the rest of Your
 people
 And also when we assemble*

The *Paralexis* is written at the end of the quire
 Doxology Batos for lord Sarapamon

Assemble all *peoples* who love the Lord God
 Jesus *Christ* in order to honour this *martyr*
 Sarapamon the *bishop*
 Jesus *Christ* had chosen him to shepherd His
people and to wear the imperishable crown of
martyrdom
 Blessed are you, O our father, the great
 Sarapamon the *bishop*, the shepherd, the *martyr*,
 the beloved of Jesus *Christ*
Hail to you O martyr Sarapamon the bishop who
is covered by light, the successor of the Apostles

Hail to you O pillar of light in the world and who
shed his blood for the name of Jesus Christ

Pray to the Lord on our behalf O *victorious*
martyr Sarapamon the bishop

Doxology Adam for the martyr Sarapamon
 Let us all assemble, O *Orthodox people in order*
to glorify our Lord Jesus Christ
 And to honour our father the *bishop* Abba
 Sarapamon the chosen *martyr*
 And sing with a joyful voice: *Hail to you martyr*
 the great Sarapamon

Hail to the pillar, hail to the shepherd, hail the
bishop Saint Sarapamon,
Hail to he who wore the imperishable crown for
his bishopric and his confession

⁸⁵ Kitab al-Absalyiat μαρτ̄ῡρο̄ς̄.

⁸⁶ Kitab al-Absalyiat σεραπαμων.

⁸⁷ Kitab al-Absalyiat σεραπαμων.

⁸⁸ Samuel al-Suriani 1984, vol. 1, p. 232. Read ω̄ο̄γ̄ν̄ιᾱτ̄κ̄.

⁸⁹ Samuel al-Suriani 1984, φ̄νε̄τ̄χο̄λ̄z̄.

⁹⁰ Read π̄ῑᾱῑᾱδο̄χο̄ς̄.

χερε πιεταερμψα εορεφναυ επενсwρ
ογορ αφερκληρονομιν μπιωνε εομεν
εβολ

χερε νак πιψωix πα πιραν ετταινοут ετε
φαι πε σεραπαμον* πιанамни ετбрноут
τερμενια мπεκран εεν ρωοу `нниπισтос
χε φ† `нсераπαμον αριβонθoin ερον
ωνιαтк⁹¹ `nθок авба σεραπαμον χε
αкоуагк нса пхс icxen текметкоуχ⁹²
ωνιαтк nθок авба σεραπαμον χε
αкерψαι nem πιпхс εен ihlм nте тπε
зiten нיעχh nте пιαтлофорос

сүн θεω icxυρος بسم الله القوي
الثامن والعشرون من هاتور عيد القديس العظيم انبا
сrαтос سرابامون اسقف مدينة نيقوس طرح واطس

Hail to he who is worthy of seeing our *Saviour*
and *inherited* everlasting life

Hail to you athlete who has the honoured name
Sarapamon, the established precious stone
The *interpretation* of your name in the mouths of
the *faithful*: God of Sarapamon *help* us
Blessed are you Abba Sarapamon for you
followed [Christ]?? since your childhood
Blessed are Abba Sarapamon for you celebrate
the feast with *Christ* in the heavenly Jerusalem
Through the *prayers* of the *athlete*

In the name of the mighty God⁹³
The 28th of Hatur the feast of the
great saint Anba Sarapamon
bishop of the city of Nikiu. Tarh
Batos

التفسير: مديح منجل الشهيد العظيم
والاسقف المكرم البار سرابامون شفاعته

The interpretation: A
glorification for the great martyr,
the honoured bishop the
righteous Sarapamon. May his
intercessions...

τενοуωυт `мф† пiαιρωmi εεν
οунаг† εφсoυтwн nem
πεφμονογενhс `нωhри nem
пипnā `м*παράκλιτον
`нтеφερεуфomин н†панагiα
†парθeнoc `нснoу nивeн
†тeоoдoкoc мapиa
θαι εтасoωгem мпeниωт
сepαпaмoн пiмapтyрoc
εβολεn тeφмeтiωт
ε†мeтxρнcтpиaннoc
αφepψφpηp нeмaφ ммoψи nxe
oγaγγeлoc нтe пбс ψaнтeφ`i
ε†вaки paкo† εен cпoуaε* nem
oуψpωic
πiαγγeлoc αφepψopп нтaмoφ
пгeнoc мпiδιkeoc
мпeнпaтpиaρχhс тeоyнa χe
nθoφ εен пhи `нcтeφaнoc
caтoтφ αφωoпφ εен oуpaψи
αq† нaφ мпивaптiсma нaφ†aиaи
ммhни εен пизмoт нтe пипnā

نسجد لله محب البشر بامانة مستقيمة
وبوحيدته الابن والروح البارقليط
ونمدح العذرى القديسة في كل حين والدة
الاله ام الرب

التي دعت هذه القديس انبا سرابامون
الشهيد من ابوية* الى النصرانية

ثم اصطحب معه في المسير ملاك من
عند الرب حتى ادخله الى مدينة
الاسكندرية باجتهاد ومعونة
فسبق الملاك واعلم رئيس الاساقفة
بطريركنا انبا ثاونا عن القديس سرابامون
انه من بيت القديس استفانوس
وللوقت قبله بفرح واعطاه المعمودية
وكان ينمو في كل يوم بنعمة الروح

Let us worship God the lover of
the humankind with straight faith
and His *Monogenes* and the Holy
Spirit the *comforter*
And we *praise* the *all-holy* ever
Virgin Mary, the God-Bearer

This who called our father
Sarapamon the *martyr* from his
parents to *Christianity*

An *angel* of the Lord
accompanied until he entered to
the city Alexandria with *haste*
and watchfulness
The angel preceded to inform the
patriarch Theonas about the *race*
of the *righteous one* for he is
from the house of Stephen
At once, he (the patriarch)
received him (Sarapamon) with
happiness and *baptised* him. He
(Sarapamon) grew daily in the
grace of the *Spirit*

⁹¹ Samuel al-Suriani 1984, ωoυνiαтк.

⁹² Samuel al-Suriani 1984, текметχωbi: "weakness".

⁹³ In Arabic and Greek.

αφριωτq μπισxαμh ντε
†μετμογναxοc* naq epzwb
nzanκαταρτωμα αqβοcι nzoγo
μπισαοc
εθβε φαι αqφoωεν mμοq nxe
πετροc πιερομαρτγροc
νογεπισκοποc ενεcωq exen
nikioγ nem manoq rhc
ziten txom nte neqeyxh nem
πταxpo nneqcbwoγi
aytacθwoγ zanoγplanh
nwanmhγ nρωmi eyepnaз† *

αγαpianoc πιζηгemων
εταqσωtem εθβε neqzhoγi
αqthiq zen oyниω† embon
ezanbacanoc eyδoci
ita on aqoγopnq ya poupo
διοκλητiанoc zen an†ioxia
naqepzγpomonin zen oytaxpoγ
ezanmhγ `ndaimωria⁹⁷
αqzιτq δa niθipion zina
ntoγomq n†oγnoγ ayzιtoγ δa
neqballayx* de on `mpeμeo
nnietoγzi⁹⁸ epatoγ

nimeω ayназ† ep̄xc̄ etaγnaγ
etaiωφhp ayziwni `mпоγpo
`nanomoc aqδoθboγ zen pwc
ntchqi
aqoγopnq ya apiane πιzγemom
`nantinoγnwoγ φhетemmay
aqel teqafe aqhek πεqagwn
mmaγ

ḡ `nxlom naγ†ziγawq oyai εθβε
teqniω† ntoγbo pikeoyai εθβε
πεqcnoc etaγfonq nat†aco

ثم البسه اسكيم الرهينة وكان يصنع
فضايل تفوق بالاكثر على الشعب

لاجل هذا قسمه بطرس خاتم الشهدا
اسقفا حاكما على مدينة نيقوس ومنوف
العليا

وبقوة صلواته وثبات اعاليمة رجعو
اناسا كثير عن ظلالتهم وصاروا مومنين

وان الوالي اريانوس لما سمع باعماله* اسلمه
بحق عظيم الى عقوبات تعبه

ثم ارسله الى الملك ديقلاديانوس بانطاكية
وكان بصبر ثابت على عقوبات كثيرة

ثم طرحوه للسباع كيما ياكلوه ولساعته
خروا تحت رجليه اما القيام

وكثيرون امنوا بالمسيح لما نظروا هذه
الاعجوبة ورجموا الملك المنافق فقتلهم بحد
السيف

ثم ارسله الى اريانا والي انصنا وذاك قطع
رأسه وكمل جهاده هناك

ووضع المخلص على رأسه الثلاثة اكاليل
الواحد منجل عظم طهارته والاخر
منجل دمه الذي اهرق بغير شفقة

He (Theonas) dressed him in the
monastic garment. He
(Sarapamon) was full of *pure*
*deeds*⁹⁴ more than the *people*
Therefore Peter the *priest-*
*martyr*⁹⁵ ordained him
(Sarapamon) as a good *bishop*
over Nikiu and Upper Menuf⁹⁶
Through the power of his *prayers*
and the firmness of his teachings
he caused many people to return
from the *error of their ways* to
become faithful

When Arianus the *governor*
heard about his deeds, he angrily
inflicted harsh *tortures upon him*

Then he sent him to king
Diocletian at Antioch. He
(Sarapamon) endured firmly
many *infirmities*

He (Diocletian) threw him
(Sarapamon) to the *wild beasts*⁹⁹
in order that they devour him. At
once they [wild beasts] lay at his
feet in the presence of all the
people¹⁰⁰

The multitudes believed in *Christ*
when they saw this miracle and
stoned the *lawless* king. He killed
them with the edge of the sword
He (the king) sent him
(Sarapamon) to Arianus the
governor of Antinoe, who then
severed his head. He
(Sarapamon) completed his
struggle there

He was given three crowns: one
for his great purity, and another
for his bloodshed

⁹⁴ Arabic: "virtues".

⁹⁵ Arabic: "the seal of martyrs".

⁹⁶ Coptic: "Menuf of the South".

⁹⁷ Read τιμωρια.

⁹⁸ Read ηηετοzi.

⁹⁹ Arabic: "Lions".

¹⁰⁰ Lit. "Those who stood up".

ΠΚΕΟΥΑΙ ΕΘΒΕ ΠΕΡΑΜΟΝΙ
 `ΝΑΣΩΟΥ¹⁰¹ ΝΛΟΓΙΚΟΝ ΖΙΤΕΝ ΠΣΑΙ
 ΝΝΕΡΣΒΩΟΥΙ ΝΕΡΠΣΑΝΙ
 `ΝΝΕΡΚΑΝΩΝ

والاخر منجل رعايته الخراف الناطقة
 بحسن تعاليمه وهدوا قوانينه

لاجل هذا نغبط هذا القديس سرايامون
 ونقول السلام لك ايها الاسقف* المكرم
 بولس الجديد هادم معابد الاصنام السلام
 لك ايها الشهيد المصطفى ليسوع المسيح
 السلام لك ايها المجاهد الذي لبس
 الاكاليل الغير بالية في يروشلیم السماوية
 مدينة الابكار ونحن الخطاة المساكين
 نسال ربنا يسوع المسيح بشفاعتك
 المقبولة قدامه ان يغفر خطايانا ويحفظ
 اولاد هذه الكنيسة من الاسوا والمكاره
 ويرذل اعدا الكنيسة المناصبين لنا ولها
 بشفاعه سيدتنا العذرى مرتمريم والشهيد
 العظيم سرايامون وجميع من ارضوا الرب
 باعمالهم الصالحة امين

And another for shepherding his
 sheep with his beautiful
 teachings and the guidance¹⁰² of
 his *canons*

Therefore we praise this saint
 Sarapamon and we say: Hail to
 you O honoured bishop, the new
 Paul, the destroyer of the temples
 of idols. Hail to you O chosen
 martyr of Jesus Christ. Hail to
 You O fighter who wore the
 imperishable crown in the
 heavenly Jerusalem, the city of
 the firstborn. We, the poor
 sinners, beseech our Lord Jesus
 Christ through your acceptable
 intercession before Him, to
 forgive our sins and to preserve
 the children of this church from
 evil and misfortune and to
 discard the enemies of the
 Church who oppose us and it (the
 church). Through the intercession
 of our Lady Mary and the great
 martyr Sarapamon and all who
 pleased the Lord through their
 good deeds. Amen!

ΤΩΒΖ ΜΠΩ̅

طرح ادم له ايضا ܐܕܐܡ

التفسير عربيا مديح من اجل الشهيد
 العظيم والاسقف المكرم انبا سرايامون

ΑΜΩΙΝΙ ΜΑΡΕΝ*ΘΩΟΥ†
 `ΝΤΕΝ†ΩΟΥ ΜΠΧ̅ ΝΕΜ
 ΠΕΡΜΕΝΡΙΤ ΝΧΩΡΙ ΣΕΡΑΠΑΜΟΝ
 ΠΙϠ
 ΠΙΕΠΙΣΚΟΠΟΣ ΝΤΕ †ΠΟΛΙΣ
 ΝΙΚΙΟΥΣ ΠΙΜΑΝΕΣΩΟΥ ΝΚΑΛΩΣ
 ΑΠΘΩΟΥ¹⁰³ `ΜΠΑΝΟΥϞ ΡΕΣ¹⁰⁴

تعالوا تجتمع نمجد المسيح وحبية القوي
 سرايامون الشهيد

والاسقف بمدينة نيقوس الراعي الصالح
 لكرسي منوف العليا

And also to him. Tarh
 The Arabic interpretation: A
 glorification for the great martyr
 and the honoured bishop Anba
 Sarapamon
 Come all, let us assemble in
 order to glorify *Christ* and His
 beloved Sarapamon the *martyr*

The *bishop* of the *city Nikiu* the
 good shepherd of the district of
 Upper Menuf¹⁰⁵

¹⁰¹ Read ΕΣΩΟΥ.

¹⁰² Meaning uncertain, translation based on Arabic.

¹⁰³ Read ΕΠΘΩΟΥ.

¹⁰⁴ Read ΡΗΣ.

¹⁰⁵ Coptic: "Menuf of the south".

ταιεκκλησια θαι ασερπμψα
εωοπη ζεν ουναζ†* μμηι nem
ουζητ πατκωρη

هذه البيعة استحققت ان تقبله بامانة
حقيقية وقلب بغير انقطاع

ونحن ايها الشعب المسيحي فلنتضرع
امامه باصوات الترتيل لكي المسيح الالهنا
الذي ارضاه ان يغفر لنا برافته ويكملنا
في الايمان المستقيم ويحنن قلوب الولاة
وحكام الامور* ويبلغا امثال هذا العيد
المبارك في العام المقبل ونحن اصحا
النفوس والاجسام ويفتح في وجوهنا
ابواب بيعته على ممر الدهور والاعوام
ويحفظنا بملايكة النورانية وينظر الينا بعين
عنايته الذي لانام ويحفظ اولاد هذه
البيعة الكهنة والشمامسة والخدام

This *Church* was worthy to receive it [his relics] in straight faith and unceasing heart. And we, O Christian people, let us beseech with joyful voices to Christ our God who is pleased to forgive us through His mercy and make us perfect in the straight faith. Let Him make the hearts of the governors, and those who are in charge, be merciful. Let Him allow us to reach this blessed feast many times in the coming year while we are healthy in soul and spirit. Let Him open the gates of the church throughout the ages and years. Let Him guard us by His angels of light and look upon us by His merciful eye that never sleeps and preserve the children of this church, the priests, deacons and ministers Through the intercessions of our Lady and the pride of our race, Lady Mary, the lady of humans and the intercessions of all those who please the Lord by their good deeds to the end of generations and days. Amen!

ΖΙΤΕΝ ---

بشفاعة سيدتنا وفخر جنسنا مرثمرم سيدة
الانام وشفاعة جميع من ارضوا الرب
باعمالهم الصالحة الى اخر الدهور والايام
امين

طرح واطس

تفسير الطرح عربيا مديح منجل الاب
الاسقف المكرم انبا سرايامون اسقف مدينة
نقيوس ومنوف العليا الذي اكمل جهاده
الحسن ولبس اكليل البتولية والاسقفية
والشهادة وبنيت على اسمه الكنائس في
مثل هذا اليوم شفاعته تكون معنا امين

Tarh Batos
The interpretation of the Tarh in Arabic: A glorification for the honoured father bishop Anba Sarapamon, bishop of Nikiu and Upper Menuf, who completed his good struggle and wore the crown of chastity and episcopacy and martyrdom, and churches were built in his name. On a day like this may his intercessions be with us. Amen

nīm peōnawca*xi epekβios θai
eōmez `npawī niben w
pimartr̥ros `nte p̄x̄c̄
ceraпамων πιεπισκοπος
cepaωi gar `nx̄e pilaos¹²¹
nasfoūtoū eyēθeληλ aīwan
caxi epektaio w pimartr̥ros
`nte p̄x̄c̄

من بقدر يتطق ويصف سيرتك هذه
المملوءة من كل فرح يا شهيد المسيح
سارابامون الاسقف
يفرح لساني وشفاتي تتهلل اذا تكلمت
بكرامتك يا شهيد المسيح

Who is able to talk about your life full of all joy O *martyr* of Christ Sarapamon the *bishop*

The tongues rejoice and my lips are happy when I talk about your honour O *martyr* of Christ

¹²¹ Read nīlac.

به الى انصنا ولما طلعه ارسوا الى نيقوس
المدينة فلم تتحرك السفينة البتة خارجا
عن الشط فكتب قضية القديس واخذوه
الاجناد وقطعوا راسه واخذوا جسده
اهل مدينة نيقوس واخفوه الى زمان >
انتهي < الاطهاد بنوا عليه كنيسة وظهر
من جسده عجائبا لا تحصى وكرزت
الكنيسة في اليوم الثامن والعشرين من
بوونة ونحن الخطاة* المساكين نسال ربنا
يسوع المسيح بشفاعته سيدتنا كلنا وفخر
جنسنا العذرى مريم والدة الخلاص
وطلبات هذه¹³³ الاب الاسقف
والشهيد انبا سرابامون ان ينعم علينا
بغفران

took the saint with him in the ship in order to go to Antioch. When they took him on board and anchored at the city Nikius, the ship did not move at all from the shore. So he (Arianus) declared the sentence of the saint. The soldiers took him and severed his head and the inhabitants of the city of Nikius took the body and hid it. When the time of persecution ended they built a church over it (the body) and uncountable miracles took place because of it (the body) and the church was consecrated on the day of the 28th of Baounah. We, the poor sinners ask our Lord Jesus Christ, through the intercession of the Lady of us all and the pride of our race, the Virgin Mary the mother of salvation and the intercessions of this father bishop, the martyr Anba Sarapamon in order that He grants us the forgiveness [of our sins]

مديح لاجل الشهيد سرابامون في الطرح <الادام>
ليس يتعب لساني البتة عندما اغبطك انا المسكين بلساني الخاطي يا بينا
الاب انبا سرابامون الاسقف المكرم البتول الطاهر الراهب الناسك
والقديس العابد والشهيد الشجاع المشتمل بالطهارة من كل وجه الذي
فتش الرب قلبه فوجده حقا اسرائيلي لاغش فيه يصنع ارادته كل حين
هذا الذي ظهرت له البتول النقية الست السيدة مريم والدة خلاص
العالم وامرته ان يمضي الى الاسكندرية*

الاب المكرم انبا ثاونا البطريك ويصير له ابنا خاصا فتوجهت اليه فقبلك
كما اعلمه الرب بذلك قبل مجيئك اليه وجعلك تساعد في جميع امور
البطريركية وتديرها لما اتامن بعده الابس الروح ايننا ابنا بطرس البطريك
الشهيد العظيم وخاتم الشهدا فكرزك اسقفا على مدينة نيقوس ومنوف
العليا وما اضيف اليهم فعند ذلك رعا رعية المسيح مخلصنا باجود رعاية

A glorification for the martyr Sarapamon, Tarh Adam

My tongue will never be tired when I praise you, me the poor one with my sinner tongue, O father Anba Sarapamon the honoured bishop, the chaste pure, ascetic monk, the worshipper [of God] the saint the brave martyr, full of purity. The Lord searched in his heart and found that he was an Israelite indeed in whom is no guile¹³⁴ always doing according to His will. The pure Virgin and Lady Mary, the Mother of salvation of all the world ordered him to go to Alexandria.

The honoured father Anba Theonas the patriarch made him as a special son as he was informed by the Lord before his coming to him. He made him assistant in all the affairs of the patriarchate and its economy. When our father Anba Peter, the great martyr and the seal of martyrs was entrusted, after him (Theonas) he

¹³³ اذه Read.

¹³⁴ Jn 1:47.

وهدمت بصلواتك المقبوله كل هياكل الاصنام فسعي بك عند الملوك
الكفرة المخالفين عباد الاصنام فطلبوك واضطهدوك لكي تتبعهم في
رايهم الفاسد وتترك عبادة سيدك يسوع*

المسيح فقاومهم باشد مقاومة وشتت الهتهم الظمئة فعذبوك بكل
عذاب صعب وانت صابرا على ذلك بقوة السيد المسيح له المجد فلما
نظروا هولاء المخالفين الى صبرك واحتمالك العذاب الصعب عند ذلك
ضجروا منك وكتبوا قضيتك وامروا ان تؤخذ راسك الطاهرة في ثامن
عشرين من شهر بونة ونلت الاكاليل الغير مضمحلة ومضيت الى المسيح
الذي احبته نفسك وبني لك البيع المقدسة وكرزت في ثامن عشرين شهر
بونة وظهر منهم الايات والاشفية والبراهين التي لا تحصى من اجل هذا
اجتمعوا جميعا ايها الشعب محبي الاله يسوع المسيح*

لنكرم هذا الشهيد سربامون الاسقف يسوع المسيح اختاره ليرعا شعبه
الذي لبس الاكاليل الغير مضمحل الذي للشهادة طوباك يا ابينا العظيم
سربامون الاسقف الراعي الشهيد حبيب يسوع المسيح السلام لك ايها
الغالب الظافر المجاهد الحبر الكامل الشهيد سربامون الذي اهرق دمه
لاجل اسم المسيح ونحن المساكين نخر ساجدين للرب الهنا لكي يغفر لنا
خطايانا بصلوات الشهيد والاشقف انبا سربامون وكافة الشهدا
والقديسين امين

القانون الذي يقال عشية وياكر في عيد سربامون

ΘΩΟΥ† ΤΗΡΟΥ Ω ΝΙΛΑΟΣ ᾠΜΜΑΙΝΟΥ† ΙΗϞ
ΠΧ̅ ΖΚΧΩ ΜΠΤΑΙΟ ΜΠΙΔΙΚΕΟΣ ΠΙΜΕΝΡΙΤ

ΝΤΕ ΠΧ̅ ΠΙΣΥΝΓΕΝΗΣ ΣΤΑΦΑΝΟΣ ΠΕΝΙΩΤ
ΝΔΙΚΕΟΣ ΣΕΡΑΠΑΜΟΝ ΠΙΕΠΙΣΚΟΠΟΣ

مرد انجيل عشية

ΘΩΟΥ† ΤΗΡΟΥ ΝΑΜΑΝΡΑ† Ω ΝΙΩΗΡΙ
ᾠΝΟΡΘΟΔΟΞΟΣ ΝΤΕΝΤΑΙΟ ᾠΜΠΙ
ΣΕΡΑΠΑΜΟΝ ΠΙΕΠΙΣΚΟΠΟΣ

ordained you as a bishop of the city of Nikiu and
Upper Menuf and what were added to them. So he
shepherded well the flock of Christ our Saviour.
Through his acceptable prayers the temples of idols
were destroyed. So the atheist opponents the
idolatrous calumniated you in front of the kings. So
they chastised you and persecuted you in order that
you follow their evil counsel and to leave the worship
of your Lord Jesus

Christ. You resisted them and you insulted their
impure gods. So they tortured you with harsh tortures
and you endured by the might of the Lord Jesus
Christ — to Him is the Glory. When the opponents saw
your patience and endurance of the harsh tortures they
gave up and declared your sentence and ordered to cut
your holy head on the 28th of the month Baounah¹³⁵
and hence you received the imperishable crowns. You
went to Christ whom your soul loved. Holy churches
were built for you and were consecrated on the 28th of
Baounah. Uncountable miracles, healing and proofs
appeared from it. Therefore, let us all assemble, O
people loving God Jesus Christ*

In order to honour this martyr, Sarapamon the bishop.
Jesus Christ chose him to shepherd His people.
(Sarapamon) wore the imperishable crown of
martyrdom. Blessed are you O our great father
Sarapamon, the bishop, the shepherd, the beloved of
Jesus Christ. Hail to you, O victorious fighter, the
perfect father, the martyr Sarapamon who shed his
blood for the name of Christ. We the poor prostrate
worshipping the Lord our God in order that He
forgives our sins through the prayers of the martyr and
bishop Anba Sarapamon and all the martyrs and saints.
Amen!

Canon for the vespers and the matins for the feast
of Sarapamon

O Assemble all you *nations* loving God Jesus
Christ. Sing the honour of the *righteous* one the
beloved of Christ, the *relative* of Stephen, our
righteous father Sarapamon the *bishop*

Response of the Gospel of the Vespers

O Assemble my beloved *Orthodox* sons in order
to honour the *martyr* Sarapamon the *bishop*

¹³⁵ The scribe seems to have confused the commemoration of the martyrdom on 28 Hatur and the commemoration of the consecration of the church. For the feasts of the summer and winter, see Youhanna Nessim Youssef 1993, pp. 173–178.

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BOOK REVIEWS

The New Chronology of Iron Age Gordion, edited by Brian C. Rose and Gareth Darbyshire. Gordion Special Studies VI, Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, Museum Monographs. 2011. Pp. xiii + 181, 118 figures, 10 tables.

This volume, which is the sixth in the series of Gordion Special Studies, was initiated and organized by the late Keith Robert DeVries and produced with the collaboration of Mary M. Voigt, G. Kenneth Sams, Peter I. Kuniholm, Maryanne W. Newton, Richard F. Liebhart, Sturt W. Manning, and Bern Kromer.

The Introduction provides a brief account of the discovery of this important site in the Polatlı district of Ankara in the late 19th century during the construction of the Berlin-Bagdad railway, and its subsequent investigation by the German classical philologist Alfred Körte who identified it as the historical Gordion. Alfred Körte after his initial investigation of the Citadel Mound (Yassihöyük) and its exposed remains, initiated the single season of excavations in 1900 together with his brother Gustav. Although they did not reach the Phrygian Destruction Level at the time, the nature and typology of the artifacts, in particular those from Tumulus K-III convinced the two brothers that they were excavating the capital of the Phrygian kingdom. They strongly believed that the confirmation for their identification could be found in some of the ancient sources such as Strabo (1.3.21) and the Latin translation of the *Chronicle* of Eusebius, as well as some Neo-Assyrian texts from the reign of Sargon II referring to Mita, king of the land of Mushku, which was equated by Hugo Winckler in 1901 with Midas, king of Phrygia. Their proposed estimate for the Gordion of Midas, ca. 700 BC, became a chronological benchmark in the subsequent research summarized by K. DeVries in Chapter 1.

This chapter, "The Creation of the Old Chronology" (13-22), provides the reader with a brief account of the fieldwork initiated by Rodney Stuart Young on behalf of the University of Pennsylvania Museum in 1950, fifty years after the Körte brothers' excavation season. It summarizes Young's input in the Gordion research program during the following two decades until his death in 1973. The excavations by Young produced several preliminary reports reflecting his support for Körte brothers' earlier conviction that the Cimmerians were responsible for the destruction of the Phrygian citadel. In his view too, the relative date of the Tumulus K-III artifacts did not challenge the reliability of the Eusebian chronology (14-15). His proposed dating of tumulus MM to 725-718 BC and the Destruction Level of the Citadel Mound to 690 BC created for a time two unchallenged chronological benchmarks. Despite these benchmarks, a number of stratigraphical and chronological questions remained obscure and often much disputed. For instance, the post-destruction time gap before the Citadel was reconstructed had to be readjusted several times as the excavations progressed and new data emerged, and the responsibility for the rebuilding had to be reassigned from the initially presumed Persians to the Lydians in 1976. Thus the reconstruction of the citadel first thought to have been the work of the Persians became referred to as "Persian only in date" and finally, a Lydian project after they took over the political control of Phrygia (17). Another unresolved chronological question elaborated in this chapter concerns the construction date of the Lower Town and its circuit wall. Parallel to the efforts to provide a more reliable destruction and post destruction dates for the consecutive levels of the Citadel, serious attempts were made for dating the construction and rebuilding phases of the Lower Town and its circuit wall. These dates had to be readjusted in tandem with the excavation progress and new findings from 1950 to 1973. Finally, this chapter summarizes the chronological convictions that emerged during this 23 year period of archaeological excavations and research, and describes the principal historical events that caused the destruction of the Early Phrygian Citadel and the subsequent rebuilding projects in Gordion. One must add that DeVries analysis of the artifacts, architecture and stratigraphy after taking over the post-excavation research following the death of Young certainly contributed in the clarification of some chronological questions while also elicited new ones.

In the next chapter, “Emerging Problems and Doubts,” Mary M. Voigt and Keith DeVries recount the slow progress made and new archaeological and historical questions raised in the efforts to date the post-destruction Middle Phrygian settlement, the destruction of the Early Phrygian citadel, the date of the Early Phrygian Citadel and Tumulus MM (23-48). The reader is reminded that the first few radiocarbon dates from Gordion excavations were published as part of “Greek and Anatolian sites” as early as in 1964 by Ellen Kohler and Elizabeth Ralph of MASCA. The three dates from the destruction levels (Megaron 3, Building CC-2) calculated by Ralph’s provisional half-life of 5800 produced values that accommodated also the lower range estimates and did not therefore challenge the traditional chronology (23). Even the admittedly more reliable short lived samples such as charred seeds, charred textile fragments and charred roof reeds from the Destruction Level produced values more compatible with the established or standard chronology when calculated by the Libby half-life (5568 \pm 30) rather than the 5700 half-life which tended to produce earlier dates. Unlike at present, at time such early dates were deemed highly controversial and therefore unacceptable. Next in this chapter is the dating of Tumulus MM, which Young thought it belonged to the immediate predecessor of Midas (24). Following Young’s death attempts towards a more accurate dating continued by focusing this time on morphological changes in the bronze fibulae and omphalos bowls, as well as typological study of the local and Greek pottery by Sams. Thus the Gordion publication committee concluded in 1975 that Tumulus MM has to be considered the very latest in the sequence of the burial mounds. However, members of the committee differed whether this tumulus was constructed slightly before or immediately after the destruction of the Early Phrygian Citadel. In the 1981 publication of the tumuli, the authors departed from Young’s proposed date of Tumulus MM and concluded, having no other means of reliable dating at the time that it belonged to Midas (26). Further complicating the dating of the Early Phrygian Citadel were the few sculpted fragmentary remains of orthostats showing stylistic parallels with their counterparts in the key 9th century North Syrian sites. Sams being cautious initially proposed a date “no later than ca. 800 BC” for the Gordion fragments in 1989, but five years later revised his assessment with a more realistic “9th century BC” timeframe (28). The resumed excavations on the Citadel Mound in 1988 had the declared goals of establishing a clearer stratigraphical sequence in order to reassess the chronology of Young’s historically significant archaeological data. Getting a clearer picture of the stratigraphy of the citadel’s Destruction Level including the subsequent construction work, the excavators finally realized that there was no chronological gap between the fire that consumed the citadel and the initial preparation of the area for the subsequent large-scale pre-Lyidian rebuilding. The project believed to have been carried out by the original inhabitants of Gordion also extended beyond the Citadel to other parts of the settlement including the so-called Lower and Outer towns (31-42). Additional chronologically significant archaeological observations, and in particular the absence of Greek pottery, finally convinced the Gordion team in the late 1990s that the 700 BC date for the Early Phrygian destruction or a late 7th – early 6th century timeframe for the Middle Phrygian rebuilding was not very realistic. Therefore, they concluded that more emphasis should be given in obtaining new and dendrochronology supported radiocarbon readings from Gordion in the efforts to resolve some of the chronological inconsistencies based on artifact comparisons and pottery dating (43-45). The result of the combined efforts was the revision of the Early Phrygian destruction Level to ca. 800 BC, in other words roughly a century earlier than originally assumed (46).

The following third chapter, “Textual Evidence and the Destruction Level” by Keith DeVries, presents the relevant ancient sources briefly mentioning the legendary Midas and listing a few of his royal contemporaries based on the royal Assyrian records. These records together with classical sources have been used by archaeologists and historians for over a century to reaffirm the historical circumstances of this Phrygian king’s death and thus continue to support a conservative date. The new archaeological picture with its revised chronology and stratigraphy indicates that the marauding Cimmerians did not cause serious devastation to the Phrygian capital. Moreover, the new dating of Tumulus MM proves, as mentioned more than once in this volume, that it could not have been the resting place of a despaired or depressed king Midas who according to the legend kept alive also by Strabo took his own life following the debacle with the Cimmerians (49-55).

The fourth chapter of this volume, “Artifacts” presented by G. Kenneth Sams examines the compatibility of the scientific dating with dates deriving from a relative chronology based on the material culture

inventories (59-78). The more reliable scientific dating of the material record in relatively absolute terms goes a long way in eliminating many of the chronological inconsistencies that existed ever since Young's systematic excavations. In the "new chronology," the radiocarbon and dendrochronological readings obtained from various contexts provide fixed points in the reassessment of the relative sequence of archaeological materials. The revised dates suggest that the destruction of the Early Phrygian Citadel occurred most likely in ca. 800 BC, in other words well before the burial in Tumulus MM now dated to ca. 740 BC (59). This revised dating explains the absence of imported Greek pottery in the Destruction Level, which is now considered to be earlier than the tumuli K-III, P and MM. According to Sams, the revised dating has also solved the temporal placement of the sculpted orthostat fragments in their proper chronological framework thus reaffirming the long suspected earlier beginnings for the Early Phrygian Citadel, perhaps earlier than the early 9th century BC (60). This chapter discusses also the contribution of various types of artifact and pottery inventories in establishing the revised timeframe of Gordion's Iron Age cultural sequence. It is clear now that some of the luxury artifacts and raw materials such as glass and ivory reached the Phrygian capital through diplomatic and trade contacts with the north Syrian states in the late 9th century BC, a century earlier than previously thought. Through these contacts which obviously started in the early 9th century BC and continued in the late 8th century BC imported items including prestige goods in chronologically defined styles made their appearance in the Phrygian capital (62). Moreover, Sams' chronological reevaluation of fibulae typology, a topic much studied and scrutinized in the past, provides a fresh and convincing argument. The section dealing with the dating of painted and monochrome pottery retrieved from the citadel and tumuli makes the reader realize the importance of finally achieving a new chronological scale for Gordion's stratigraphy which can now be used for dating other Phrygian and non-Phrygian sites in the central plateau and beyond (67-73). One example is the so-called Alişar IV style painted ware which has long been considered an important chronological marker not only in the Halys region but also to the east of Phrygia.

In Chapter 5, "Dendrochronology at Gordion" Peter Ian Kuniholm and Maryanne W. Newton (with contributions by Richard F. Liebhart) provide a refreshing account of the application of this dating method in the revision of Iron Age chronology (79-122). Since the timbers recovered from the architectural remains in the citadel were not as well preserved as those from Tumulus MM, the latter produced a fixed point at ca. 740 BC for dating in terms of timeframe the associated artifacts in the tomb and for evaluating artifact seriation and chronology of the Destruction Level by now estimated at ca. 800 BC. The dendrochronological reading of the recovered timber with no preserved bark or outer rings from Early Phrygian Citadel remains provide a flexible *terminus post quem* for the construction of buildings in the Destruction Level and earlier (79). The authors describe the beginning of tree-ring work at the site in some detail. This was reportedly a long and difficult laboratory process which eventually led to the creation of the "1028-year backbone" based on the timbers from Tumulus MM and Kızılarkayası Tumulus A (80-81). Following a brief account of these tumuli and analysis of their timbers the chapter details the efforts made to achieve an absolute date. These attempts required the placing of the floating 1028-year dendrochronology in its real timeframe with the help of wiggle-matched radiocarbon dating. In pinning down the Gordion dendrochronology the authors describe some of the problems they encountered with the combined scientific dating process. Liebhart's important contribution to this chapter is in the section dealing with the relationship of the Tumulus MM dendrochronology to the date of the tomb's construction (92-94). Although not ruling out entirely the possibility that the juniper logs used in the construction of Tumulus MM could have been reused timbers or derived from an existing stockpile, Liebhart prefers to assume that they were used soon after the trees were cut down. Therefore, in his view the date 740 BC (+4/-7) for the felling of the trees most likely marks the construction date of the tomb. The dendrochronology of the citadel mound for the Early Phrygian (YHSS 6A) pre-Destruction Level, Terrace period and Middle Phrygian, post-Destruction Level (YHSS 5), derived from two chronologies, one based on 119 pine samples with a total 335-year sequence (1184-850 BC), and 14 juniper samples with a 337-year sequence (1238-862 BC) (94-96). Accordingly, the authors establish a *terminus post quem* for the construction or repair of some buildings in pre-Terrace period YHSS 6A: ca. 1071 BC for Megaron 9; ca. 944 BC for Megaron 6; ca. 939 BC for Megaron 5; ca. 911 BC for Megaron 3; ca. 892 BC for the Early Phrygian Gate Building, South Court. As

for the *terminus ante quem* for their destruction dates or the construction dates of buildings in YHSS 6A (Terrace period) and YHSS 5 (Middle Phrygian), the imprecise dating of *in situ* artifacts they yielded produce a relatively flexible timeframe. Finally, Appendix A (96-99) and Appendix B (99-115) contain the dated series of tree samples retrieved from major buildings on the Gordion Citadel Mound. This detailed database accompanied by clear descriptions and commentary is illustrated by charts, tables and figures.

The sixth chapter, "Radiocarbon Dating Iron Age Gordion and Early Phrygian Destruction in Particular" composed by Stuart W. Manning and Bernd Kromer summarizes the work on the reports which continued to the end of 2006, then revised in 2009 and submitted to the publisher with a postscript in 2010 (146-150). The authors admit that despite its broad acceptance some of their colleagues view the new chronology for Gordion with suspicion still preferring the older dates. They mostly question the suitability of relying on the northern hemisphere calibration curve (IntCal98 Dataset) for calibrating the Anatolian radiocarbon dates. After listing the radiocarbon wiggle-matched tree-ring samples from Gordion (124-132), Manning and Kromer devote a significant part of their discussion in defending the reliability of the radiocarbon readings published by DeVries, K., Kuniholm, P.I., G.K.Sams, and M.M. Voigt in:

- 1) 2003. "New Dates for Iron Age Gordion," *Antiquity* 77/296, Project Gallery: <http://antiquity.ac.uk/ProjGall/devries/devries.html>
- 2) 2004. "In answer to the criticism pursued by Keenan D.J., Radiocarbon Dates from Gordion Are Confounded," *Ancient West & East* 3(1):100-103.

They try to clarify the reasons for the striking differences in the dates of barley samples versus lentil samples from Gordion, and explain the intra and inter-annual variability for short-lived and long-lived samples which were pointed out by Keenan in his criticism (2004:101-102) (135-137). After analyzing the Gordion Destruction Level data (YHSS 6A-DL period) (137-142), and summarizing the overall Iron Age C14 sequence, Manning and Kromer conclude that the date for the Early Phrygian Destruction Level, which they consider an important chronological anchor for the Central Anatolian Iron Age should be placed either within the 835/820-805/795 BC range or better between 830/815-810/800 BC (142).

The last chapter, "In Conclusion" presented by G. Kenneth Sams and Mary M. Voigt (155-168), the two seasoned senior members of the Gordion Project team, is followed by a Turkish Summary/Özet (169-172). This short chapter sums up the revised chronological evaluation of the archeological data ever since Young's excavations at Gordion. The revision of Gordion's chronology obviously solves many archaeological problems and historical inconsistencies. It also absolves the Cimmerians as the culprits behind the destruction of the Early Phrygian Citadel. Its destruction is now believed to have been perhaps caused by an accidental fire that briefly delayed the ongoing rebuilding program in the capital. The revised dating of the pre- and post Destruction Level archaeological sequence opened the way to a fresh reconsideration of historically significant events. Sams and Voigt convincingly demonstrate that the destroyed Citadel with its monumental architecture represents the last of the multi-phase Early Phrygian royal compound whose beginnings may well date to the late 10th or early 9th century BC. Fragments of decorative sculptures rendered in Neo-Hittite style recovered from one of the YHSS 6B buildings also support the early dating for the beginning of the Early Phrygian period. As already emphasized by Sams and Voigt, this is not very surprising considering that the slow reorganization of ethno-political forces in the central, southeastern and eastern parts of Anatolia after the demise of the Hittite Kingdom gradually culminated in the formation of a number of strong Middle Iron Age polities, among them Tabal and Urartu, documented in the Assyrian sources (155-156). Although the lengthy investigations did not clarify once and for all what caused the destruction of the Early Phrygian Citadel other than raising the possibility of an accidental fire, we are told that the Phrygians immediately renewed the earlier rebuilding activities they had started prior the destructive event. The result was the creation of a more impressive Middle Phrygian Citadel in temporally spaced out building stages in the 8th century BC. It is further presumed that the ca. 60 yrs old royal occupant of Tumulus MM, who had become a ruler perhaps as early as ca. 780 BC, could have supervised in his lifetime most of the reconstruction of the Middle Phrygian Citadel. The new chronological scheme does not change much the roughly estimated date of Midas' (Mita) reign. Although a contemporary of Sargon II, it cannot be ruled out that he may have occupied the Phrygian throne in the final years of Tiglath-Pileser III. The authors

do not entirely rule out that an attack by Cimmerian marauders perhaps active in the central plateau could have taken place in the early 7th century BC during the reign of Midas. The damage from such an attack on Gordion could have been limited to some houses on the Northeast Ridge situated well outside the Middle Phrygian Citadel. Since the Citadel itself bears no signs of a major conflagration, the attack if it took place, must have been less destructive than previously estimated (164). The authors referring to the Early Iron Age Gordion, argue with conviction that new groups probably from the Balkans arrived here no later than in the 11th century BC. These newcomers settling in the ruined Hittite period settlement introduced a rather flimsy semi-subterranean village architecture and a handmade pottery, both traditions significantly crude when compared to the earlier Hittite period counterparts.

The editors and authors of this volume must be congratulated for their interminable efforts to produce this important study which details in length the achievements as well as the shortcomings of their investigations geared to studying Gordion's Iron Age archaeology and history, as well as other Anatolian and Aegean centers that interacted culturally and politically with Phrygia, from a clearer and more reliable chronological perspective.

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Lydian Architecture: Ashlar Masonry Structures at Sardis, by Christopher Ratté with contributions by Michael H. Ramage and Robert H. Tykot. Archaeological Explorations at Sardis Report 5. Cambridge MA: Harvard University Press, 2011.

This handsome volume in the Archaeological Explorations at Sardis series is an extensive reworking of Christopher Ratté's doctoral thesis. The first thing to say about it is that none of the ashlar masonry structures at Sardis are buildings, without exception they are elements in the defences, monumental terraces and tombs. Thus the volume has much more to do with masonry styles and stone working techniques than with architecture. The second general point is that the seemingly specialist subject of ashlar masonry at the capital of ancient Lydia is of far broader importance in the study architectural history in the ancient world than might be supposed. This significance comes from extensive but inconclusive debates about the origins and development of masonry techniques and architectural traditions in the Eastern Mediterranean and Ancient Near Eastern worlds in the Late Bronze and Iron Ages. Lydia and Ionia have been central to this ongoing discussion, Sardis taking centre stage because of both the extent and the quality of its sixth century BCE remains.¹

After a Foreword by Nicholas Cahill, the current Director of the Harvard-Cornell Archaeological Exploration of Sardis, an Author's Preface and a brief Turkish summary the bulk of this volume is divided into two roughly equal parts. Part I comprises five chapters: Survey of the Monuments, Materials, Techniques of Construction, Chronology, and History of the Lydian Building Tradition. Part II is a detailed catalogue of the monuments. This bipartite division makes for a certain amount of unavoidable repetition, but does have the distinct advantage of separating discussion and interpretation from description. While it is the first part that will be of most interest to scholars and students not immersed in the archaeology of Sardis, it is the second part that will probably be the most important in the long term because little here will become outdated in the light of ongoing and future research. A chronological table on page 114 makes instantly clear that only a few massive retaining walls on the acropolis, the Lydian gate in area MMS/N, monumental terraces at the area called Byzantine Fortress and a small exposure of large footings at Mound 2, together with the so-called Tomb of Alyattes and a second massive tumulus called Karnıyarık Tepe can be

¹ For an overview of the archaeology of Lydia see now Cahill (editor) 2010.

attributed to the Lydian period, that is to the late seventh and first half of the sixth centuries BCE, i.e. before the destruction attributed to the Persian conquest by Cyrus the Great which is traditionally and probably correctly dated to the 540s BCE. The other thirteen structures, all tombs, range in date from the after destruction to as late as fourth century. The first of three appendices catalogues 15 architectural and ornamental fragments (pp. 115-160), a second (p. 161) discusses and rather dismisses early accounts of a crepis wall around the Tomb of Alyattes while a third (pp. 123-125) describes the Altar of Artemis which was omitted from the main catalogue because of clear differences in tradition. A fourth Appendix by Michael Ramage and Robert Tykot (pp. 127-132) is concerned with geological sourcing of building stones. Good illustrations, including a number of excellent architectural drawings credited on page xi, take up pages 135 to 270. Bibliography and useful index complete the volume.

This volume, like earlier studies by Nylander (1970) and Boardman (2000) considers Lydian masonry, including tools such as the claw chisel and saws, and various types of clamps as chronological indicators through which it might be possible to trace the origins and spread of styles and techniques. All these studies look principally to Greece, North Syria and the Levant, including Cyprus; and the Near East, by which is meant Neo-Assyria. Ashlar masonry does not appear to have its origins in Lydia, still less so in coastal Ionia where the earlier polygonal style is best seen at Old Smyrna. Hence the as yet inconclusive search for progenitors. We may agree that Phrygia, Lydia's northern highland neighbor which it was to conquer in the early sixth century, has nothing to do with it. This might surprise given that both Lydia and Phrygia developed traditions of royal burial in monumental tumuli, but size is the only common denominator here. While Ratté reinforces rejection of Greece, and is surely correct in doubting Boardman's promotion of Assyria, his conclusions are necessarily inconclusive, with influences from Cyprus, North Syria and the Levant and from Mesopotamia all considered possible. There is more to say here. If, as seems likely, the tradition of Lydian tumulus burial is traceable back to the Mycenaean world, the genius of the Lydian masons to employ imported tools and techniques with which to fashion masonry was distinctly theirs. The long gap in archaeological knowledge between the collapse of the Late Bronze Age and the first known appearance of Lydian monumentality remains, however, an obstacle to a search for continuity. The origins of the masonry techniques are to be found in Anatolia and the Levant towards the end of the Late Bronze Age, at Hittite monuments such as Eflatun Pinar (see now Bachmann and Öziner 2004) as well as at Hattusa itself (Seeher 2009). On the Syrian coast there is Ugarit (e.g. Boardman 2000, 24 pl. 2.3). These Late Bronze Age ashlar traditions disappear from the archaeological record in the so-called Dark Age. When they reappear it is as orthostats fronting the lower courses of massive mudbrick walling, often but by no means always carved in relief from contrasting black basalt and white limestone, an option not immediately available to Lydian builders. Ain Dara and new discoveries in the Temple of the Storm God at Aleppo demonstrate continuity in North Syrian masonry (Kohlmeyer 2009). If the Late Bronze Age gates, palaces and temples of Carchemish are ever discovered, then they too might hold surprises. And what of Cilicia, the splendours of which are hinted at by the remote fortress at Karatepe before Que (the Assyrian name for Cilicia) became a province of Assyria. Sardis, it might be remembered, was not on the coast but located in the broad Hermes Valley, inland from Ionia. In a period of aggressive expansion under Alyattes and Croesus the Ionian cities were conquered. Lydian ambitions were not, however, restricted to the Aegean coast. Phrygia was absorbed and interests in what was to become Cappadocia were contested with the Medes as a prelude to the Persian conquest. It should not be forgotten that there were powerful Neo-Hittite states on the Anatolian Plateau in addition to the far better known Syro-Hittite cities. The extraordinary mountaintop sanctuary on Göllü Dağ (Schirmer 2002) provides a hint that the city of Tyanna, seat of King Warpawalas beneath modern Kemerhisar, could have rivalled its Syro-Hittite contemporaries. The question, which it is not possible to answer, is whether the elusive origins of Lydian ashlar masonry can be traced directly from those of the Late Bronze Age through North Syrian or Anatolian intermediaries.

Ratté's volume sets out the available evidence at Sardis. As such it provides an excellent starting point for broader investigations aimed at unravelling complex interrelationships between the ancient Near East and the Eastern Mediterranean in the first half of the first millennium BCE. New work at Sardis, in progress as this is being written, promises to reveal much more about this Lydian capital. It might not come

as a great surprise to discover that antecedents of Lydian architecture, including its megalithic ashlar masonry, are to be found in the earlier part of the Iron Age at Sardis itself. Moving beyond ashlar masonry, the design of the excavated Lydian Gate at Sardis owes nothing to Neo-Hittite, North Syrian or Mesopotamian designs (for which see Herzog 1986). Rather, with an open court in front, it is perhaps a more western in concept. So too, for that matter, is the high waterless acropolis, a sacred place and refuge of last resort. The Colossal Lydian Structure, with solid walls 15 metres wide and huge external glacis punctuated by enigmatic recesses, seems to be Lydian. What little is known of other pre-Persian architecture points towards the western or Aegean tradition of freestanding buildings with double pitched roofs, rather than ranges of flat-roofed rooms arranged around internal courtyards.

While this review has concentrated on issues surrounding the vexed question of the origins of Lydian masonry, the value of this book lays equally in the deep influence that Lydian masonry and masons had in Persia. Although this is not new ground, Ratté makes important contributions in the identification of two monuments at Pasargade as bearing clear Lydian, as opposed to Ionian, imprint: the Tomb of Cyrus and the Tall-i Takht. In short, this volume on the ashlar masonry structures at Sardis is much more than a catalogue, it is an assessment of the place of Lydian masonry as it was employed for monumental structures, including defences, monumental terraces and royal tombs, in complex cultural and political interrelations between Lydia and its contemporaries, as well as Lydian architectural legacies to Iran and the East Greek world.

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Jebel Khalid on the Euphrates, Volume 3: *The Pottery*, by Heather Jackson and John Tidmarsh. Meditarch Supplement 7 (2011). Meditarch Publications, 2011. Hardcover, Pp. 586, 4 col plates, 36 b/w plates. ISBN: 9780958026536, A\$ 160.00

Jebel Khalid, established on the west side of the River Euphrates in northern Syria, has been the scene of ongoing systematic archaeological excavations since 1986 conducted by a team co-directed by Professor Graeme Clarke (Australian National University) and Dr Heather Jackson (The University of Melbourne). Coins of the the first half of the 3rd century BC found during excavations point to the establishment of the settlement in the first quarter of the century. The structure of the site with a 3.4 km long defensive wall, towers, bastions, and a walled acropolis reflect its purpose, namely, to protect the route passing across the Euphrates.

The lack of any finds before the excavations of the Hellenistic period show that the first settlement was built on virgin soil. Jebel Khalid is one of many settlements that came under the influence of the Seleucid Empire, which dominated the region until 70–60 BC, when Jebel Khalid was systematically abandoned. This timeframe is consistent throughout the region for the abandonment of settlements. Ancient texts mention the cities of *Amphipolis* and *Nicatoris* in the area, but these have not been verified by any inscriptions found in the excavations at Jebel Khalid.

Three volumes so far, including the one under review, have examined more than twenty years of excavations at Jebel Khalid. The other two are Graeme Clarke *et al.* *Jebel Khalid on the Euphrates*, Volume 1: *Report on the Excavations 1986–1996*, and Heather Jackson's *Jebel Khalid on the Euphrates*, Volume 2: *The Terracotta Figurines*.

This third volume consists of five main chapters. In the first chapter, Heather Jackson discusses 'The Common Wares from the Housing Insula' part (pp. 1–101), followed by a substantial Catalogue (pp. 103–261). After a brief general introduction, Jackson presents a succinct account of the context and chronology. This is followed by accounts on the criteria that are used in the construction of the typology — fabric, texture, surface treatment, and so on. The typology of the ceramics is examined in the second part. Here, in general, the methodology follows convention, whereby ceramics are divided into broad types based on shape. Jackson's explanation of the typology is very user friendly. Reference to the illustrations in the text are highlighted in bold, also useful. Various graphs showing the distribution of pottery types over phases add to the quantity of information. As noted in the last paragraph of the chapter, the broader interpretation on daily life at Jebel Khalid as reflected in ceramics is left for Chapter 5, when the conclusions derived from the analyses of common wares and fine wares are integrated. The Catalogue itself is also very clear and set out in a logical fashion. Containers are grouped from small to large, with unguentaria and other miscellaneous types placed at the end. The format of the Catalogue is extremely useful: the descriptions of the items are placed on the left page, whereas the drawings of the ceramics are laid on the right page.

The second chapter (pp. 263–276), written by David Garnett and Heather Jackson with the assistance of Eric Clayton and Helen Waldron, is devoted to 'Geochemical Characteristics of Jebel Khalid Clays'. Analyses were made of samples taken from the ceramics, and these data are presented in a number of tables and graphs; possible sources of the raw material form part of the discussion. Geochemical analyses are increasingly used in the repertoire of archaeological techniques, and their application to the Jebel Khalid ceramics provide us with potentially useful "fingerprints" of daily life.

The third chapter (pp. 279–397) is a comprehensive study of the imported fines wares: Eastern Sigillata Wares, Black-Glazed Ware, Burnished Grey Ware, Moulded Bowls, and West Slope. Here, John Tidmarsh brings together material evidence from the Acropolis, Housing Insula (1988–2005), Main Gate, Northwest Tower, and other excavation sites such as the Western Necropolis. The distribution of these wares are provided in a Table at the beginning of this chapter. A discussion of the fine wares follows. First, are the Black-Glazed wares, followed by Campana B ware. General comments on the shape and geographical distribution are accompanied by a descriptive catalogue, and finally the illustrations. Burnished Grey Ware, Moulded Bowls, and West Slope are presented in the same way. Each catalogue entry provide various data, including its context within the excavation, the description of the item, and parallels within the greater region. At the end of the chapter is a Concordance of Fine Wares, followed by the illustrative catalogue of

drawings, starting with plates. In its structure this chapter follows the study of ceramics from the Agora. In this regard, although the first chapter (on Common Wares) and this chapter have similar aims — a discussion and presentation of the ceramic types — the different format and structure gives the impression of two separate rather than integrated studies. As for the Common Wares, the review of what Fine Wares can tell us about the daily lives at Jebel Khalid is left until later.

Next come the Green-Glazed Wares excavated between 1986–2006 (pp. 431–485) written by Jackson. The chapter begins with a few introductory remarks about fabric, glaze and manufacture, as well as chronology. Jackson reminds us that this ceramic group is sometimes referred to as ‘Parthian Ware’, because of its occurrence in the Parthian occupation level at Dura-Europos. But this cultural connotation is avoided in the discussion. In addition to Dura-Europos, other centres that produced this eye-catching pottery include Failaka, in the Persian Gulf, and Seleucia-on-the-Tigris. The rest of the chapter adopts the same structure as the earlier presentations: a catalogue of items followed by an overview of the ceramic type, and ending with the illustrative catalogue. Again, data rather than interpretation is the primary concern.

In the fifth and final chapter — ‘Life in the Housing Insula: The Evidence of the Pottery’ (pp. 497–518) — Jackson pulls all the data together and offers some assessment with regard to daily life. Here Jackson synthesises the evidence for the functions of Common Wares and Fine Wares to shed light on the behaviour of its users. The discussion proceeds according to the defined phases at Jebel Khalid. Thus, for each of the Phases — A (late 3rd – ca. 150 BC), B and B+ (150–70 BC) — the evidence for imports, drinking, eating, food preparation, cooking, storage and transport, and personal vessels are evaluated in turn. At the end of each of the two phases, we are provided with a summary of the economic and social conditions. This approach enables the reader to monitor the changing life of the residents of Jebel Khalid. Following this, Jackson discusses issues such as cultural fusion, local versus imports, and hybridity, and concludes that “... the pottery has provided a good deal of evidence that the inhabitants may have been permanent settlers, rather than garrisoned military personnel on tour of duty”. These analyses of a ceramic typology are very inspiring.

At the end of the book there are three Appendices. The first of these (pp. 519–525) is a comparison of the geochemical signatures between Jebel Khalid and Antioch; samples from the latter were analysed in tandem with those from Jebel Khalid, using neutron activation. The second (pp. 527–543) extends the comparison to include Pella, whereas the Appendix III (pp. 547–553) presents the data on the geochemistry of Green-Glazed ware. Each of the three appendices has ample tables and graphs. To this reviewer, it would have been more appropriate to place Chapter 2 here, with the data. That way the reader would have had all the geochemical evidence of the clays, from Jebel Khalid and elsewhere, in one place.

There are 36 Plates at the end of the book. Four of these are in colour. These colour photographs are extremely useful, especially in distinguishing locally produced green glazed wares.

Jebel Khalid was founded around the beginning of the Hellenistic period and was abandoned relatively early. As a discrete settlement of the Hellenistic period, it is very important. It was not destroyed or disturbed very much by later building activity, and so it will help us to solve not only many problems of dating, but can also provide an overview of behavioural activity. In this sense, Jebel Khalid will help us to clarify many issues of the Hellenistic period elsewhere. The value of this volume is both the detail it presents on the Jebel Khalid typology, and, as such, the contribution it will make to the archaeology of the Eastern Mediterranean and the Aegean world in general.

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